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Advanced View Arduino Projects List

List of Projects using arduino with advance view:

1. [Arduino: How to Build an Obstacle Avoiding Robot](#)

   This instructable is the written version of my "Arduino: How To Build An Obstacle Avoiding Robot" Youtube video that I've uploaded recently. I strongly recommend you to check it out. My YouTube Channel. Please Subscribe for Support So, without further ado, Let's get started !...... Listed under: [Robotics – Automation Projects](#)
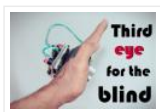
2. [Using ESP-01 and Arduino UNO](#)

   In our previous tutorial, we learned how to set up the ESP8266 ESP-01 and establish communication with other devices. In this tutorial we are going to show how to use the ESP-01 module to give the Arduino UNO access to a Wi-Fi network and interact with inputs and outputs. Step 1: Materials The materials...... Listed under: [LED Projects](#)

3. [Getting Started With the ESP8266 ESP-01](#)

   The ESP8266 ESP-01 is a Wi-Fi module that allows microcontrollers access to a Wi-Fi network. This module is a self-contained SOC (System On a Chip) that doesn't necessarily need a microcontroller to manipulate inputs and outputs as you would normally do with an Arduino, for example, because the ESP-01 acts as a small...... Listed under: [Wifi – WLan Projects](#)

4. [THIRD EYE FOR THE BLIND – an Innovative Wearable Technology for Blinds.](#)

   – The first wearable technology for blinds – Using ultrasonic waves to detect the obstacles – Notifying the user through vibrations/buzzer sound Third eye for blinds is an innovation which helps the blinds people to navigate with speed and confidence by detecting the nearby obstacles...... Listed under: [Other Projects](#)

5. [Sending Data From Arduino to Python Via USB](#)

   For several projects you might want to acquire some data from an Arduino board. There are several options and the one that I chose here uses the USB connection. I will explain how to store your data in a text file in order to plot...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#)

6. [Read a Potentiometer With Arduino's Analog Input](#)

https://youtu.be/-EDYMQ9lczA Let's learn how to read a potentiometer, a type of rotating variable resistor, using Arduino's analog input! We'll connect up a simple circuit using a solderless breadboard and use some simple Arduino code to control a single LED. So far you've learned to control LEDs…… Listed under: [Other Projects](#)

7. [DIY – Automated Garden Irrigation – (Arduino / IOT)](#)

This project will show you how to build an irrigation controller for a home garden. Capable of measuring soil moisture readings and activating irrigation from a garden tap if the soil becomes too dry. The controller also includes a temperature and humidity sensor. The controller…… Listed under: [Home Automation Projects](#)

8. [How to Connect the ESP8266 NodeMCU to the IoT Cloud](#)

This instructable shows you a simple Internet of Things demo using the ESP8266 NodeMCU and an online IoT service called AskSensors. We demonstrate you how to quickly get data from the ESP8266 HTTPS client and plot it in graph into the AskSensors IoT Platform. Step 1:…… Listed under: [Internet – Ethernet – LAN Projects](#)

9. [Fish Feeder 2](#)

Introduction / Why this project In 2016 I build my first fish feeder, see Fish Feeder 1. The feeder worked fine for more then half a year. After that period the servos were worn out, causing the program to halt, without sending an error-mail. Oops. I didn't…… Listed under: [Other Projects](#)

10. [Peggy – Arduino Portable RF Rain Tracker](#)

My country mild climate lets the sun to shine for the greatest part of the year, then tumble driers are not widely used and so we often use to drain clothes in the sun. What to do when a sudden rainfall comes? This project has…… Listed under: [Wifi – WLan Projects](#)

11. [Home Automation Using Arduino With Wifi, Bluetooth and IR Remote Control](#)

This is a tutorial to show how to build a home automation system using arduino with Wifi [ESP8266-01], bluetooth (HC-05) and IR remote control. Home automation results in a smarter home and is used to provide a higher and healthier standard of living. The beauty…… Listed under: [Home Automation Projects](#)

12. [DIY | Ambilight Using Arduino Nano](#)

In this Instructable I will be teaching you how you can create your own (b)ambilight for under $40!Keep in mind that the Ambilight will only work on a PC running the Bambilight software. You will need the following components: Individually addressable RGB LED strip – Available on AliexpressArduino…… Listed under: [LED Projects](#)

13. [DIY Smart Follow Me Drone With Camera (Arduino Based)](#)

Drones are very popular toys and tools these days. You can find professional and even beginner drones and flying gadgets in the market. I have four drones (quadcopters and hexcopters), because I love everything that flies, but the 200th flight isn't so interesting and starts…… Listed under: [Video – Camera – Imaging Projects](#)

14. [How to Use Water Flow Sensor – Arduino Tutorial](#)

In this tutorial you will learn how to use one water flow sensor with an Arduino board. The water flow sensor consists of a plastic valve body, a water rotor and a hall-effect sensor. When the water flows through the rotor, rotor rolls and the...... Listed under: Sensor – Transducer – Detector Projects

15. Arduino Password Unlock Door Security System

Hello! In this Instructables guide I will show you how to make your own password unlock door system by using the Arduino uno board. I made my own circuit by using the ATmega328 micro controller but this is an optional step. In this guide I...... Listed under: Security – Safety Projects

16. RFID Door Lock With Arduino

Here we are with the classic RFID door lock. It's classic in that whole, "We live in the future and take it for granted at this point" sense. In this tutorial, we will set up a door latch that can be opened with the swipe...... Listed under: Security – Safety Projects

17. Long Range, 1.8km, Arduino to Arduino Wireless Communication With the HC-12.

https://youtu.be/DGRPqeacJns In this instructable you will learn how to communicate between Arduinos over a long distance up to 1.8km in open air. The HC-12 is a wireless serial port communication module that is very useful, extremely powerful and easy to use. First you will learn...... Listed under: Wireless Projects

18. Arduino : How to Control Stepper Motor Via Bluetooth (with Smartphone)

This instructable is the written version of my "Arduino : How To Control Stepper Motor via Bluetooth (with Smartphone)" In this project we will control a Stepper motor with a smartphone via bluetooth. My YouTube Channel First, you should see the following Instructable: How to...... Listed under: Phone Projects

19. Head Mouse With MPU6050 and Arduino Micro

https://youtu.be/zsUDoa4-fQg Hi everyone, here it is my new project, a mouse controlled with the movement of the head!I decided to make this project once I received my accelerometer/gyroscope MPU6050 from IC Station, and I wanted to do something useful with this.Then I found out that...... Listed under: Other Projects

20. Arduino – Sound Sensor (with LED)

This instructable is the written version of my "Arduino – Sound Sensor (with LED)" YouTube video that I've uploaded recently. I strongly recommend you to check it out. My YouTube Channel Step 1: Tutorial https://youtu.be/setjiVH0_lY Sound sensors can be used for a variety of things,...... Listed under: Sound – Audio Projects

21. Gesture Controlled Robotic Arm Using Kinect & Arduino

This is a Simulink Model to Control a Robotic Arm By Gestures that are captured using Kinect. A Robotic Arm is developed using Servo Motors. Step 1: Things Used in This Project https://youtu.be/Z4z3K5SwySE Hardware components: Arduino Mega 2560Microsoft Kinect for Xbox 360Microsoft Xbox Kinect AdapterAdafruit...... Listed under: Robotics – Automation Projects

22. Sparrow – My Assistant

https://youtu.be/wYEzNOmNGLA https://youtu.be/RWchc7x-J1s Hello everyone. I am a graphic designer with a restless soul (my site www.inoace.com). I loved doing electronics years ago and than got busy with life and job. I am now blessed with some time (rare now a days 😀). This is…… Listed under: Other Projects

23. The Interactive Donation Box

Donation boxes can be much more interesting and attractive when you combine them with electronics and a little bit of programming. This instructable will show you how to. As the name explains, making donation boxes interactive can help you gain much more attention and make…… Listed under: Other Projects

24. Distinguish Walking and Running Using Machine Learning

Electronic market is full of devices called pedometer and fitness tracker. They counts the number of steps you have taken, distance you have covered, whether you are walking or running and bunch of other stuff. Ever wondered, how these devices perform such measurements. I decided…… Listed under: Other Projects

25. Tracked Robot Bluetooth Controlled by Arduino Via Android Application

https://youtu.be/J3DwgZvD2js After trying to remote tracked robot by IR remote control.I have proceed to control same robot platform by Bluetooth Arduino controller via Android application.This method is more reliable,longer distance,pretty Android application enhancement. Same principle,low cost play and home level technical skill.Programming khownledge is not…… Listed under: Bluetooth Projects

26. Connecting "stuff" Via Bluetooth / Android / Arduino

A very good wireless local area network (and personal) is undoubtedly the Bluetooth (BT). Today in our day-to-day is common to find us using cell phones, stereos, cameras, etc., interconnected with the help of the famous "blue little light". In the world of IoT and…… Listed under: Bluetooth Projects

27. Voice to Arduino: Control LEDs Using MIT Speech Recognizer

Hello, everybody!!! It has been some time I had not updated my post here. Today I would like to share with you guys an experiment I made. I am going to control LEDs using MIT app inventor speech recognizer. Oh before I forget, I had…… Listed under: LED Projects

28. SparkRover – 3D Printed Smartphone Controlled Robot

Over the years, I have built several large robots using a custom-made robotics driver that I created called the SmartRover system. This driver was initially used for my SmartRover robot that I built which ran at a peak current of 60 amps at 24 volts.…… Listed under: Robotics – Automation Projects

29. Phone Controlled Computer Starter

https://youtu.be/QhhOxIe02Ok Have you ever wanted to start your computer while you are away from home to access some files? Or maybe you wanted to start a download of a new game, so that it would be done when you got home. This project will show…… Listed under: Phone Projects

30. Arduino Basics: Emulate Your Arduino Circuits Online

Want to make your arduino circuits online? want to test components with your code before buying? Then this is the right instructable for you. Lets start! Step 1: Open and Sign Up for 123D Circuits 1) Log on to 123D circuits and then make your…… Listed under: [Other Projects](#)

31. [DIY Muscle Sensor / EMG Circuit for a Microcontroller](#)

Measuring muscle activation via electric potential, referred to as electromyography (EMG) , has traditionally been used for medical research and diagnosis of neuromuscular disorders. However, with the advent of ever shrinking yet more powerful microcontrollers and integrated circuits, EMG circuits and sensors have found their…… Listed under: [Sensor – Transducer – Detector Projects](#)

32. [3W 4'x4' Arduino Laser Cutter/Engraver](#)

https://youtu.be/CbzY5ECsFuQ https://youtu.be/4ybdqgmePDs In this tutorial you will learn how to make your own 4 ft by 4 ft, Arduino controlled, 3 watt laser engraver / cutter (for thin materials) for around 300$. The main thing that separates this tutorial from other laser engraver tutorials on…… Listed under: [Other Projects](#)

33. [Color Recognition Lock](#)

There are a lot of ways that you can activate an electronic lock. You can use passwords, radio signals, or even voice commands. In this project, I am going to show you how to make a lock box that opens and closes based on color…… Listed under: [Security – Safety Projects](#)

34. [3D Printed Robot](#)

https://youtu.be/AJ1TfieZ6Dg The nice thing about 3D printing is that it makes building robots easy. You can design whatever configuration of parts that you can dream up and have them in your hand virtually right away. This allows for rapid prototyping and experimention. This particular 3D…… Listed under: [Robotics – Automation Projects](#)

35. [Drawing Robot](#)

https://youtu.be/bkCg6-8Zuf0 https://youtu.be/Laz_4UWLW6Q Please vote for Drawing Robot on this link. Thanx in advance Fixing my drawing incapability with my robotics skills and to me results were not that bad. Now I can at least save my self from humiliation in my drawing class. This project…… Listed under: [Robotics – Automation Projects](#)

36. [Mini BillBoard](#)

Designing a Mini BillBoard using LED Lights(different colors) , Arduino and Bread Board. Thought of creating a mini billboard, that could display my name ("Josh") . This is for one of the build nights (required us to use LED lights). This billboard would blink in…… Listed under: [LED Projects](#)

37. [Motor Controllers for Cheap Robots](#)

Hey! This I'ble is now out of date! I made an updated version which you can read here! Hope you find it fun and useful! ~~~~~ Thus far, I've shown you how to create wheels out of household items, severalmotorizedchassis out of cardboard, and a…… Listed under: [Motor Projects](#)

38. [Dark Sensor With LDR, Transistor and a LED](#)

You wan't do a dark sensor with a LDR, one transistor and one LED and you don't know how to do it? In this small tutorial I will explain to you how you can do that even if you know only the basics of electronic....... Listed under: [LED Projects](#)

39. [How to Make a Remote Controlled Robotic Hand With Arduino](#)

https://youtu.be/efO-ooyS-mo This is my school project for the 5th year of high school (I'm Italian, we have 5 years of high school). It consists in an artificial hand controlled by a glove with flex sensors. The artificial hand reproduces the movements of the hand with...... Listed under: [Robotics – Automation Projects](#)

40. [Program Your Arduino With an Android Device!](#)

Hi, in this Instructable I want to show you, how you can program your Arduino with your Android device. It is very simple and cheap. Also it allows us to program our Arduino where ever we want, this is usefull for permanently installed Arduino boards,...... Listed under: [Arduino Programmer Projects](#)

41. [DIY Tilt Switch.](#)

In this instructable I'll show you how to make a simple tilt switch, this tilt switch works best with microcontrollers that can debounce the signal and overcome interferences produced by vibrations. There are many ways to make a tilt switch, this one is a cheap...... Listed under: [Other Projects](#)

42. [Nexus 7 and the Arduino.](#)

Will show several ways to show how to use an Arduino as a sensor using The Nexus 7 for a terminal and to do development. This can be very important for protecting your electronic equipment especially servers.Note 1: All connections are to a standard Arduino...... Listed under: [Other Projects](#)

43. [Remote Controlled Robot](#)

The purpose of this final project was to create a small mobile robot and control it via a wireless controller. To accomplish our goal, we decided to use the Arduino Uno microcontroller as the base for both the controller and robot. For the wireless functionality...... Listed under: [Robotics – Automation Projects](#)

44. [Das Blinken Bonken! an Arduino Ball Throwing Game Platform.](#)

https://youtu.be/UPtVqJkY8N8 This is a fun and pretty easy project that I built as a Christmas present for my kid who loves throwing things. Watch the video to see what it can do. It's built out of a regular Arduino UNO, pressure sensors made from velostat,...... Listed under: [Game – Entertainment Projects](#)

45. [Arduino Assisted RC Truck/Car](#)

Recently I dusted off my 7 year old Stampede 2wd, designed in 1996. I got it for my 8th birthday. The truck was great, but it had a few caveats. For example, if the truck ran out of range, battery was low, or the transmitter batteries...... Listed under: [Car Projects](#)

46. KeySampler

This instrument was build by Lieven Menschaert and Danny Leen using an Arduino Uno and some hardware components (rotary encoder, potentiometer and simple iron bolts). The software running the actual audio and video is a Pure Data / GEM patch. Additionaly Echonest API was…… Listed under: Other Projects

47. Tidal Clock

This is a tutorial for making the Tidal Clock. The clock shows the ebb and flow between high and low tide by a rising and falling water level. It consists of an airtight acrylic container that has a front visible chamber and a back hidden…… Listed under: Clock – Timer Projects

48. Pocket Laser Engraver.

I have been trying to get my hands on a laser cutter for some time but they always seem out of reach. All the great things that can be done with a real laser cutter tickle the imagination. I feel it's time to share my…… Listed under: Other Projects
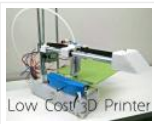
49. Arduino Uno Xylophone

This xylophone uses the Arduino Uno and a multiplexer to identify when one of eight keys are struck, and play that sound via midi sound on a computer. An optional part of the instructions also allows each key to light up with two LED lights…… Listed under: Phone Projects

50. How to Make a Cheap Attiny Arduino Board

Well most of time i get troubled when i need Arduino in some projects where i need few I/O pinsWell thanks to Arduino-Tiny platformArduino program can be burned into the Avr-tiny Series like Attiny 85/45 Arduino-Tiny is an open source set of ATtiny "cores" for…… Listed under: Other Projects

51. Edge 3D Printer 1.0 – an Affordable Open Source 3D Printer!

Hello everyone! In this instructable I will show you how to make a low cost 3d printer that I designed! It should cost around $150 US dollars or $175 Canadian dollars, if you buy from the links provided in this project (parts are from Aliexpress)……. Listed under: CNC Machines Projects

52. How to Control a Nixie Tube With an Arduino

A Nixie Tube is a Neon gas-filled tube, that has a wiremesh anode with various cathodes shaped like numbers or symbols. Back in the 1950s they were used in computers, calculators, and laboratory equipment. Nixie tubes were replaced by LEDs and VFDs(vacuum fluorescent displays)in the…… Listed under: Other Projects

53. WiFi Enabled Arduino – Interfacing With Web APIs

Are you familiar with Arduino, but are looking for a little more connectivity in your projects? This Instructable goes over a new (and cheap) wireless module that has hit the embedded world hard – the ESP8266. This little module is a perfect way to hook…… Listed

under:

My university had a bunch of old server motherboards that were headed to the dumpster. I decided to see the feasibility of turning them into something useful! Go ahead and grab the attached pdf plans, print them out full size, and build your own! Step...... Listed under:

the photo you see was taken from my first ever copter which i built in 2 hours, what i had not mentioned was my first copter used a laser cut frame i designed and produced whilst in school.This difference between this post and my other...... Listed under:

https://youtu.be/Uo2aUUNhdKs I designed this project for a 10-hour workshop for ChickTech.org whose goal is to introduce teenage women to STEM topics. The goals for this project were: Easy to build.Easy to program.Did something interesting.Low-cost so participants could take it home and continue to learn. With...... Listed under:
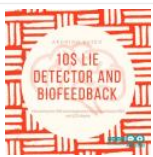
I apologize if you find spelling errors or nonsensical text, my language is Spanish and has not been easy to translate, I will improve my English to continue composing instructables. In today's technology, especially electronics have come a long way, to the point that today...... Listed under:

Some days ago I bought a laser rangefinder (Uni-T UT390b, f.e. http://www.dx.com/de/p/uni-t-ut390b-45m-laser-dist...) to realise a simple LiDAR. The rangefinder has an accuracy of +/- 2mm and is able to measure distances up to 45m. This will be enough for my living room ☺ You'll also...... Listed under:

This tutorial will explain how to build a machine for biofeedback. But first a bit of theory. What is biofeedback? [Font: Wikipedia | https://en.wikipedia.org/wiki/Biofeedback] Biofeedback is the process of gaining greater awareness of many physiological functions primarily using instruments that provide information on the activity of...... Listed under:

This is an inexpensive, DIY, Arduino-powered oneironautics device that allows users to alert themselves when they are in a deep dreamstate, without waking up. In other words, this machine will tell you when you are dreaming, while you are dreaming. Why is this such a big...... Listed under:

61. [DIY Arduino 3D Laser Scanner](#)

FabScan is an open-source, do-it-yourself 3D laser scanner.It started out as a Bachelor's thesis by Francis Engelmann, supervised by René Bohne. You can find official project here. I made my own box from MDF hood sheets and use different hardware parts.I decided to make this guide...... Listed under: [Other Projects](#)

62. [Control TV With Any Phone (Even Phones Without IR Blaster)](#)

Do you want to control your TV and several other gadgets that are IR controlled? Ya but my phone doesn't support it because it doesn't have an IR blaster.Don't worry here a gadget that gives IR control to any phone and the thing it needs...... Listed under: [Phone Projects](#)

63. [Course on MIT App Inventor and Arduino](#)

I have made many tutorials for creating apps using MIT app inventor and connected the app with arduino to make things work, I often get email stating something went missing when they follow my tutorial, Here's a step by step tutorial on getting started with...... Listed under: [Motor Projects](#)

64. [Use the Force… or Your Brainwaves? (multifuctional Thought Controlled System)](#)

As a kid I always wanted to have a special ability, like moving objects with thoughts or flying. I tried to move objects with "the power of my mind" of course with no success. Well, yes, I was and I am a huge Star Wars...... Listed under: [Home Automation Projects](#)

65. [Arduino Bluetooth Basic Tutorial](#)

Ever thought of controlling any electronic devices with your smart phone ?Controlling your robot or any other devices with your smartphone will be really cool. Here is is a simple and basic tutorial for interfacing Bluetooth with arduino Step 1: Things You Need Hardware Bluetooth Module HC 05/06ArduinoLED220Ω ResistorAndroid device...... Listed under: [Bluetooth Projects](#)

66. [A Levitating Sphere Rotates Glows and Blinks With Arduino](#)

A levitating little Death Star in Instructables invited me to the new project with Arduino. Three policies were decided and kept to differentiate it from the forerunner. Do it myself with no (or less) ready-made.Keep rotating.Make glow and blink without battery.VIDEO(1): A Levitating Sphere Rotates Glows...... Listed under: [Other Projects](#)

67. [Car Dash Tablet](#)

Putting a tablet in car dash.This project was on my mind for a long time.Somehow I couldn't find any free time to build this project. But now I have done it and I'll tell you how. My car is a VW Polo (2014) and…… Listed under: [Car Projects](#)

68. [Using NXT Components With a Micro Controller](#)

This is a guide to using the motors and sensors from the LEGO NXT set with a Parallax Basic Stamp II or BS2. However, rather than just providing schematics and sample code for the BS2, I'll be providing some theory on how the sensors work…… Listed under: [Other Projects](#)

69. [Program Your Arduino With an Android Device Over Bluetooth](#)

Hello world, in this Instructable I want to show you, how to program your Arduino Uno with your Android device over Bluetooth. It is very simple and so cheap. Also it allows us to program our Arduino where ever we want over wireless bluetooth… So…… Listed under: [Bluetooth Projects](#)
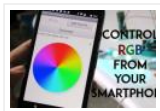
70. [Arduino Mosquito Repeller](#)

In this instructable I'm going to show you how to build a mosquito repeller using an Arduino. The repeller is in the form of a shield that plugs into the Arduino board and the frequency of the repeller can be changed easily. This project is ideal…… Listed under: [Other Projects](#)

71. [DIY Standalone Weather Station Powered by Arduino](#)

Hello Makers out there Again this is not a Step by step Instructable . Like always i forgot to take take snaps since the inception of this project.The idea of Building a community weather station using Open hardware Kicked a long back. We people from…… Listed under: [Sensor – Transducer – Detector Projects](#)

72. [SmartPhone Controlled RGB MOOD Light](#)

Mood lamps are always fascinating for me and is a very good project for starters to start with Arduino. What is a Mood Lamp ? Mood lamps are lighting devices that are used to establish a particular feeling or mood within a room. In some…… Listed under: [Phone Projects](#)

73. [DIY CNC for 60$ (Large Work Area)](#)

Hi there I've been here after a long time, and this time I've made a huge project as compared to my earlier ones. This is a full-sized 250 mm X 300 mm work area CNC machine and more interesting things is that it was made…… Listed under: [CNC Machines Projects](#)

74. [Make an Optical Disk Display](#)

Every curious how DVDs work? Interested in learning some simple analog electronics? This Instructables will show you how to make an optical disk display project in only a few hours. What is an optical disk? An optical disk stores data/information and can be read or…… Listed under: [LED Projects](#)

75. [How to Work With Conductive Fabric](#)

Working with conductive fabric is fun and it's ideal for wearables, soft circuitry, e-textiles and other projects that take advantage of it's properties. Learning the basics will help you make design and material choices tailored to your application. This Instructable is jam-packed with insights from...... Listed under: [LED Projects](#)

76. [The MicroSlice V1 | a Tiny Arduino Laser Cutter](#)

A few years ago I saw an Instructable where Groover had used a pair of DVD-RW drives to make a pocket laser engraver. Inspired by the idea, driven by the recent purchase of a full-sized 50 watt CO2 laser cutter, and roused by the launch of the Microcontroller contest I took...... Listed under: [Other Projects](#)

77. [The Nerd Watch](#)

Hello! Welcome to another Other Machine project tutorial! I'm Sam DeRose, a former Other Machine Co. Summer Intern. I created the Nerd Watch last summer while working at OMC. The Nerd Watch displays the time in binary when the button is pushed. The watch shows the...... Listed under: [Clock – Timer Projects](#)

78. [Intro to LED Strips](#)

https://youtu.be/IbkUL7U1qIA LED strips are a very fun and effective way to give lots of glow and color to a project. In this Instructable you will learn about the basic kinds of strips and how to hook them up to the Intel Edison with Arduino breakout...... Listed under: [LED Projects](#)

79. [Arduino: CNC Machine / Part 2](#)

Hey guys this is part 2 of my Arduino CNC machine! Thanks to you guys you motivated me to make my next part into building this! This is me building the y-axis on the CNC machine. Hope you guys enjoy! Step 1: Patreon As you...... Listed under: [CNC Machines Projects](#)

80. [Smartphone Controlled Cat Laser](#)

https://youtu.be/Q05TAoPIHtQ I've been wanting to start exploring the world of microcontrollers and programming for some time now, so I came up with this simple project which uses an app called "Blynk" to allow you to wirelessly control an Arduino board through your wifi. Now obviously...... Listed under: [Phone Projects](#)

81. [Print Conductive Circuits With an Inkjet Printer](#)

This tutorial will teach you how to modify your average inkjet printer to be able to print electrically conductive circuits. This technology is fairly new but can provide a faster and safer prototyping option for DIY printed circuit boards. This project also acts as an...... Listed under: [Other Projects](#)

82. [How to Make a Cheap Arduino MIDI Controller](#)

I'm a huge fan of technology and music, but when I decided to start making my own electronic music, I was discouraged by the high price of MIDI keyboards and controllers. After a lot of tinkering, I saw the opportunity to create my own MIDI...... Listed under: [Sound – Audio Projects](#)

83. [“With U Smart Sole” DIY GPS Embedded Smart Shoe Sole #MITBetterWorld](#)

What do you do when someone is chasing you or you are lost? Cross your fingers? Don't. When you are in trouble, just cross your feet [in a special way] and your location is sent to your family members. Wait there's more! Even the family can get your location just...... Listed under: [GPS Based Projects](#)

84. [Arduino Solar Tracker (Single or Dual Axis)](#)

https://youtu.be/5KljnLkbgB4 If you've installed solar panels on a camper van to provide you with electricity on your camping trip or at home to supplement your electricity usage or take your home completely off grid then you probably know that the panels work the best when...... Listed under: [Solar energy projects](#)

85. [Arduino Data Glasses for My Multimeter](#)

https://youtu.be/lkl6yVauCKg Video of the working device Trying to build a cheap Arduino Data Glasses for everybody. Why? I just wanted one. It's working, and now it can even help to avoid accidents. From the first idea to the working prototype, it took 4 Month The...... Listed under: [Home Automation Projects](#)

86. [Make Your Own GPS SMS Security Tracking System](#)

In this project I will show you how to combine a SIM5320 3G module with an Arduino and a piezoelectric transducer as a shock sensor in order to create a security tracking system that will send you the location of your precious vehicle via SMS...... Listed under: [Security – Safety Projects](#)

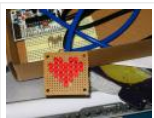87. [DIY Multi Featured Robot With Arduino](#)

This robot was mainly built for understanding Arduino and combining various projects of Arduino to form a Multi Featured Arduino Robot. And further, who doesn't want to have a pet robot? So I named it BLUE ROVIER 316. I could have bought a beautiful tracked...... Listed under: [Robotics – Automation Projects](#)

88. [Arduino XMAS Hitcounter](#)

Christmas is coming closer, so here is my contribution to put you in the right mood. It is a blog hitcounter, that rings a bell. Literally. It puts a smile on your face, every time someone hits your blog. It consists of an Arduino board,...... Listed under: [Motor Projects](#)

89. [Arduino Charliplexed Heart, Just in Time for Valentines Day.](#)

Here is an Arduino controlled Charliplexed LED heart just in time for Valentine's Day. It uses a total of 6 wires to controll the 27 LEDs. A PIC or AVR could easily be used for this, but I have Arduinos lying around and they are...... Listed under: [LED Projects](#)

90. [N: How to Make a Multi-layered Acrylic and LED Sculpture With Variable Lighting Levels](#)

Here you can find out how to make you very own n as made for the exhibition www.laplandscape.co.uk curated by art/design group Lapland. More images can be seen at flickr This exhibition runs from Wednesday 26 November – Friday 12 December 2008 inclusive, and had a private view on Tuesday...... Listed under: [LED Projects](#)

91. [Drumming MIDI Glove Using Arduino and Light Sensors](#)

I will describe a fun and easy way to build your own sound expression MIDI enabled glove without expending lot's of money on MIDI Interfaces or expensive sensors. Feel free to contact me directly by mail if you like it or have suggestions. This project...... Listed under: [Sensor – Transducer – Detector Projects](#)

92. [DIY Bare Minimum Arduino Mega 2560](#)

[2017 Update] Eagle files please click here. The objective of this project is to create a version of Arduino Mega 2560 board that has lower component count and smaller board size. Personally to be used for robotics projects that require ATmega2560's 256 KB flash and digital/analog...... Listed under: [LED Projects](#)

93. [How to Make Your Own Professional Arduino Sheld](#)

In this instructable I will show you how to make your own professional looking arduino shield. In the proses of designing the arduino shield I will use eagle.cad, arduino software & viewplot. First step in making a arduino shield is thinking of what you want...... Listed under: [Arduino Programmer Projects](#)

94. [Arduino Radio](#)

https://youtu.be/3WbK-S2WDLQ Update 16.04.2015 just thought how would a "cool" kit look a like, so I get an altoids tin box eat all the thinks inside and put all necassary parts inside. ☺ a new project from good old Germany. I got some of those very...... Listed under: [Radio Projects](#)

95. [Serial Communication – Arduino and Linkit One](#)

In this instructable I'm going show you how to establish serial communication between the arduino and the Linkit One. This would help you make a more complex project with these two boards. Step 1: Components Here is a list of all the components required to...... Listed under: [Arduino Programmer Projects](#)

96. [Arduino Laser Harp](#)

A couple of weeks ago I presented my culmination project, framed laser harp, at New York City College of Technology. Work on it was so interesting for me, that I decided to share it here. I am an Arduino amateur and don't have any professional...... Listed under: [LED Projects](#)

97. [Arduino Simple Memory Game](#)

This project is all about creating a simple game to test your memory. I'll be using a Teensy 3.0 board. (If you want to know more about this board please click here to read a Getting Started Guide). This project is also 100% compatible with the Arduino....... Listed under: [Memory – Storage Projects](#)

98. [Salvaging Liquid Crystal Displays (LCDs)](#)

Almost all electronics have some sort of human interface, from blinking lights and beeping speakers to seven segment alphanumeric and Liquid Crystal Displays. This Instructable is about salvaging and testing Liquid Crystal Displays, and a couple tricks I know to make salvaging them more successful....... Listed under: [LCD Projects](#)

99. [Datalogger With Temperature Sensor and Photoresistor](#)

In this project I'm going to create a simple Datalogger with my Arduino and an Ethernet shield.I'll be using a photoresistor and a temperature sensor and all the information will be stored in a micro SD card.The idea is that you can apply this to…… Listed under: [Sensor – Transducer – Detector Projects](#)

100. [Motorized Pulldown Curtain (Phone & Radio Controlled)](#)

https://youtu.be/v0-TlGm9BxM I pull my curtain up and down a couple of times a day. If I watch a movie I pull it down and then, I pull it up to get better lighting. I also pull it down when I go to sleep and I…… Listed under: [Radio Projects](#)

101. [Arduino Sprinkler Valves + Wifi + Twitter](#)

This is my first post so… be brutal ! I have a small yard with a very odd shape, well… L-shaped really and not enough pressure at the tap to be able to water it in one go. So I had to create 3 sprinkler…… Listed under: [Wifi – WLan Projects](#)

102. [Simple Audio Amplifier](#)

In most cases first project in electronics for beginners is building simple audio amplifier. That is because it requires small number of elements and not a lot of knowledge to build one. For low power amplifiers we could use integrated circuits like TDA family. But…… Listed under: [Sound – Audio Projects](#)

103. [Use Arduino Code on a TI Launchpad MSP430](#)

You can now use Arduino sketches to program your TI Launchpad MSP430. The video show me programming an Arduino Mega 2560 and a TI Launchpad MSP430 with the same Arduino sketch. https://youtu.be/-KKmkwHapSw The TI Launchpad MSP430 is a microprocessor development board from Texas Instruments. It's…… Listed under: [Arduino Programmer Projects](#)

104. [Wearable Wireless Gesture Control With PHIRO Pro + Arduino + Pocket Code Smartphone App (JEDI MODE)](#)

Once again, here we are with another tutorial to "Awaken the Force" within you! With the new Star Wars movie just around the corner, we thought it would be fun to use the force to control PHIRO. In this tutorial, we will be using PHIRO Pro with Arduino along with some awesome…… Listed under: [Wireless Projects](#)

105. [Arduino Lock Bar…sorta](#)

This project was tough but nothing worth doing is easy and i am ver proud that i was able to accomplish what i did. To know that my skills are further than they once were is a reward on their own…….but how did i get…… Listed under: [Security – Safety Projects](#)

106. [Arduino LED Matrix](#)
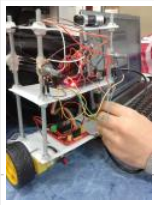
https://youtu.be/Eu9ExmHkkIk https://youtu.be/_srC_gPAEP0 In this short tutorial you will learn how to make an Arduino-powered LED matrix. Unlike several other designs, this one uses a "companion" computer to notify the Arduino which LEDs should be powered. I have provided the code for the Arduino, as well…… Listed under: [LED Projects](#)
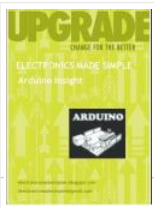
107. Panner With Arduino

This project it's a new time-lapse tripod or panning with two axis that works with an arduino protoboard. Everyone will be able to create their own time-lapse trajectory without need to check it. With the arduino code we'll can change the value for the movement...... Listed under: Motor Projects

108. Arduino Self Balancing Robot

In this project I will describe the construction of robots standing in equilibrium with Arduino.We explained in our previous version of the android controlled project. In this project we will move to our control. Let's go let's get to our building project. Step 1: Materials:...... Listed under: Robotics – Automation Projects

109. Arduino Insight -Beginner LED'S and (Binary Counter 16 Bit)

Hello friends...!!! This is my first tutorial on Instructables, in this tutorial I'm going to show you* Write a simple program for glowing LED* Group of LED program* Explain analog output (PWM)* Create a simple project of (4 bit binary counter).Small BIO:Friends we know that...... Listed under: LED Projects

110. Arduino Project in 5 Minutes

https://youtu.be/qdnoPGi0sR8 In the following Instructable, we'll show you how you can make your next Arduino project in just 5 minutes. It's simple, easy and fun. Step 1: Plan It! 1. Go to Circuito.io 2. Select the components in the screenshot, add a description and your...... Listed under: Arduino Programmer Projects

111. Arduino Thermometer

Its hot here in Los Angeles! Besides the massive drought California is in, Its not as cool around here lately. I wanted to build something to see just how hot it really was, and here it is! Read this instructable and Ill teach how you...... Listed under: LCD Projects

112. Giant Arduino GEMMA Side Table

They're always serving up something hot at Adafruit. Make this giant Arduino GEMMA side table to use as a platform for various purposes. I needed a small utility table next to my BBQ grill so I made this. Enjoy afternoon tea or cappuccino outdoors in...... Listed under: Home Automation Projects

113. Arduino Ethernet Camera

I will introduce a Arduino ethernet Camera. You can take a picture inside of house which have a this arduino ethernet camera by just openning the web site if you follow this contents. It is very easy and simple way which don't need any app....... Listed under: Video – Camera – Imaging Projects

114. Arduino Controlled CNC / 3D Printer Hybrid

The objective of this instructable is to guide your way throw the entire making process of building a BuildersBot machine. An open design Arduino Controlled CNC Router that can also perform 3D printing. The instructions will cover all areas such as design, mechanics, electronics and…… Listed under: [CNC Machines Projects](#)

115. [Arduino Robot](#)

first of all, i am sorry if i have grammar mistakes, i am asian and i am 13 years old, i study arduino by my self (mostly my self) and this is my first project and also my first instructables. this is the robot that…… Listed under: [Robotics – Automation Projects](#)

116. [Arduino-Using Shift Registers With Ultrasonic Sensors](#)

The HC-SR04 Ultrasonic range sensing module is great for sensing distances that can be used as an input for your Arduino projects, but using multiple (more than two) can quickly cost you a lot of pins. This basic Instructable gives you the code and basic…… Listed under: [Sensor – Transducer – Detector Projects](#)

117. [Turn Signal Biking Jacket](#)

This tutorial will show you how to build a jacket with turn signals that will let people know where you're headed when you're on your bike. We'll use conductive thread and sewable electronics so your jacket will be soft and wearable and washable when you're…… Listed under: [Internet – Ethernet – LAN Projects](#)

118. [Control Your Home Appliances Using Arduino and Relay](#)

Hello everyone, In this instructable we will be using Arduino And Relay module to control home appliances. This instructable covers: Basics of Relays.Connecting Relays with Arduino.Controlling AC appliances using Relays. How it works: The relay uses an electromagnet to mechanically switch electric appliances.A relay can…… Listed under: [Home Automation Projects](#)

119. [Automated Plant Watering System](#)

House Plant Babysitter Going away from a while? Need something to babysit your house plants?This box will automatically deliver an adjustable volume of water to four plants (or less) every day, or once every "x" day (up to seven days). A micro controller handles the…… Listed under: [Home Automation Projects](#)

120. [The Maven Box: an Arduino Controller for Software Developers](#)

Every job has it's routine. I am a software developer who works with a Git/Maven based workspace everyday. So when I start working, my daily routine is to update and build my local workspace, pulling changes from GitHub, execute a maven build and execute the…… Listed under: [Development Board – Kits Projects](#)

121. [Arduino Type K Temperature Indicator](#)

There are lots of Arduino projects to read temperature with different devices, this is an easy one to measure high temperatures with type K thermocouples (1300ºC).Skills necessary for this project are basic (buying max IC already mounted) but I have mount an MAX31855 in a…… Listed under: [Temperature Measurement Projects](#)

122. [Lettuce for Life – Arduino 101 Based Automated Controller for Hydroponics, Aeroponics, Aquaponics, Etc. Intel Curie](#)

SUMMARY A device that can be used to control up to 4 different Hydroponic/Aeroponic Systems at once. The device will control the components of the system and will display notification to a LCD screen and allow the user to customize settings via Bluetooth. This system…… Listed under: [LCD Projects](#)

123. [Synesthesia Mask](#)

https://youtu.be/9vLSuLL9xLA Inspiration What if I told you that 2+2=Red!?!? What!?! I know this sounds crazy but for people with synesthesia this might be their reality. Synesthesia is defined as "the production of a sense impression relating to one sense or part of the body by…… Listed under: [Sensor – Transducer – Detector Projects](#)

124. [Environmental Alert System](#)

https://youtu.be/gWZ6Z1ptUis What's that smell? It's noxious gas of course! If you're in an environment where there's a possibility of gaseous release of which you'd rather not breathe, why not build an automatic system for sensing and alerting you? The design for the Environmental Alert System…… Listed under: [Security – Safety Projects](#)

125. [Intro to GPS With Microcontrollers](#)

https://youtu.be/_Qog6ofGD5Y Once the purview of strictly military operations, GPS has become a regular part of modern living and in relatively short time! Who wouldn't want want to know when and where they are anywhere on the planet? It's a science fiction dream brought into reality,…… Listed under: [GPS Based Projects](#)

126. [InstaKISS : Networked Picture Frames](#)

These frames are connected to the internet, which allows you to instantly send a kiss to a loved one. When my boyfriend and I were in a long distance relationship (for one and half years!), we communicated anyway that we could. We talked on the…… Listed under: [Internet – Ethernet – LAN Projects](#)

127. [Make Your Own Motorized Camera Slider](#)

In this project I will show you how I repurposed two old camera tripods in order to create a motorized camera slider. The mechanical system consist mostly of aluminium and stainless steel which makes the slider sturdy and pretty decent looking. The electrical system consists…… Listed under: [Video – Camera – Imaging Projects](#)

128. [Arduino Ping Pong Ball Cannon](#)

https://youtu.be/XOybUHFUD8o Overview: This instructable uses a Trossen Robotics Pan and Tilt kit to construct an Arduino controlled ping pong ball cannon. The project also uses several other components from Trossen Robotics including a medium solenoid,
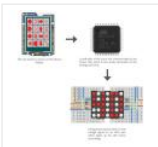
a relay and various items from one of their Robotics Grab Bags. A joystick controls the…… Listed under: [Sound – Audio Projects](#)

129. [Simple Arduino-based Thermometer](#)

Building an Arduino project isn't just about making all the components talk to one another. It's about creating an actual object or prototype out of your small creation, and giving it that extra touch that makes it unique. For this next project, we took some…… Listed under: [Temperature Measurement Projects](#)

130. [LED Matrix Controller Using 4Duino](#)

In this project, we will use the digital pins and screen of the 4Duino to create a 5×7 LED matrix controller with a user graphical interface. https://youtu.be/fSCNCFmbSJc An LED matrix is essentially many LEDs packaged in a dot grid format in order to produce pictures…… Listed under: [LED Projects](#)

131. [Arduino Sunflower – an Electronic Sundancer](#)

Maker is always sensitive to the new and funny things. One day, I watched a video, in which the sunflower moves along with the sun. I had a sudden insight then. Why can't I make a electronic device inmitating this biomechanism. In the following days,…… Listed under: [Solar energy projects](#)

132. [B-SENSOR: DIY PRESSURE CUSHION](#)

This project examines how interface pressure is a key risk factor in the development of pressure ulcers. Visual feedback of continuous interface pressure between the body and support surface could inform clinicians on repositioning strategies and play a key role in an overall strategy for…… Listed under: [Sensor – Transducer – Detector Projects](#)

133. [Which MICROCONTROLLER for Your ELECTRONIC FASHION?](#)

What Does Fashion Lack? "Microcontrollers" I always answer – and it's TRUE! It makes your garments SO much more interesting, interactive and communicative as soon as you add some INTELLIGENCE to it. But which ones are on the market? I started a little research on…… Listed under: [Bluetooth Projects](#)

134. [How to Use the Adafruit Flora Board – Arduino Tutorial](#)

In this tutorial you will learn how to use the Adafruit Flora board and how you can easily program it with Codebender! FLORA is Adafruit's fully-featured wearable electronics platform. It's a round, sewable, Arduino-compatible microcontroller designed to empower amazing wearables projects. The FLORA family also…… Listed under: [LED Projects](#)

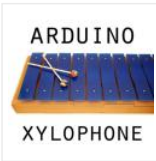135. [VU Meter – LED Noise-o-Meter for Classrooms](#)

I built this a short while ago as an idea to use in a primary classroom setting. Poster displays are often used by primary teachers wanting to control the noise levels in their classrooms but I wanted to add technology to make it dynamic and…… Listed under: [LED Projects](#)

136. [Program Arduino Pro Mini Using Arduino Uno](#)

Hello everyone. Today I am going to show how to program arduino pro mini using arduino uno. If you already had a arduino uno and you newly buy arduino pro mini then you don't need to buy the USB to serial converter to program the...... Listed under: [Arduino Programmer Projects](#)

137. [Arduino Xylophone](#)

I made a xylophone that uses an Arduino Mega to detect when a note is struck, and generate MIDI output. This project is wonderful because I essentially made a xylophone, a drumkit, and any other MIDI controlled sound instrument, with one tool. The following steps...... Listed under: [Internet – Ethernet – LAN Projects](#)

138. [Arduino Nano to Arduino Uno Adapter](#)

Arduino Nano is a nice, small and cheap member of the Arduino family. It is based on the Atmega328 chip, what makes it as powerful as the biggest his brother Arduino Uno, but it can be obtained for less money. In Ebay now Chinese versions...... Listed under: [Arduino Programmer Projects](#)

139. [Arduino LED Exploration](#)

Arduino LED ExplorationMy program shows you all of the data on your Led from the first light to the normal operation light. From that data you can pick an RS that is good light, but lower in current. You must build the circuit to run...... Listed under: [LED Projects](#)

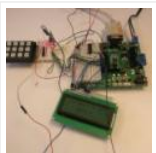140. [LilyPad Arduino Painted Canvas With Music and Lights](#)

This is a project that I created for my Children and Technology class that I am taking in my Masters of Library Science Program. This was one of my first experiences with coding so this was a trial and error process but this instructable should...... Listed under: [Sound – Audio Projects](#)

141. [Arduino Voting Machine](#)

This instructable will teach you to build a simple Arduino based Voting machine using simple components such as push buttons and LCD. The highlighting feature of this system is that Serial Monitor in Arduino IDE is used to perform the polling operation no other external...... Listed under: [LED Projects](#)
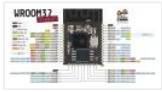
142. [Smart Irrigation System](#)

A Smart Irrigation System is designed, in which the irrigation will take place only when there will be intense requirement of water [gallery columns="2" size="medium" ids="31116,31117"] as suggested by the moisture in the soil. The aim of our project is to minimize this manual intervention...... Listed under: [Irrigation Projects](#)

143. [esp32 devkit v1 pinout](#)

GPIO pins of ESP32 DEVKIT As mentioned earlier, the chip used with this board has 48 GPIO pins, but all pins are not accessible through development boards. ESP32 devkit has 36 pins and 18 on each side of the board as shown in the picture...... Listed under: [Pinouts](#)

144. [ESP32-WROOM-32 (ESP-WROOM-32)](#)

This tutorial is about pinout of the ESP32 development board, especially for ESP32 devkit. ESP32 devkit consists of ESP-WROOM-32 module. There are many versions of ESP32 chip available in the market. But ESP32 devkit uses ESP-WROOM-32module. But the functionality of all GPIO pins is the same across all...... Listed under: [Pinouts](#)

145. [Arduino-Controlled 12V Battery Charger](#)

The circuit presented here can automatically charge a 12V, 7Ah battery, or above. Special features of the charger are as follows. It automatically controls the charging current as per the status of the battery. Battery voltage level as well as charging status are indicated on...... Listed under: [Battery Projects](#)

146. [12-Multi National Digital Clock on Arduino UNO](#)

The presence of 12-Multi-National Digital clocks is very common at the lobby / front desk of star hotels, showing time & dates of several countries where from most of the guests to arrive to stay at the hotel. One common feature of these clocks is...... Listed under: [Clock – Timer Projects](#)

147. [Arduino-Based Coil Winding Temperature Recorder and Alarm Generator](#)

Monitoring the temperature of a transformer or electric motor winding involves data acquisition. This project is developed to monitor the temperature of an electric motor and a transformer with high accuracy, incorporating display and alarm facility. This circuit can be installed near a transformer winding...... Listed under: [Clock – Timer Projects](#), [Temperature Measurement Projects](#)

148. [Arduino-Based MOSFET Terminal Identification System](#)

Metal oxide semiconductor field effect transistor (MOSFET) is a semiconductor device widely used for switching applications and amplifying electronic signals. While the facility to determine the type and pin configuration of bipolar junction transistors (BJTs) are available in digital multimeters (DMMs) used in the laboratory,...... Listed under: [Development Board – Kits Projects](#)

149. [DC Panel Meter using Arduino](#)

Panel meters in regulated power supplies are used to display electrical parameters like voltage and current. Presented here is a circuit to display DC voltage and current of power supplies, including DIY-type ones. Circuit and working Circuit diagram of the DC panel meter using Arduino...... Listed under: [Metering – Instrument Projects](#)

150. [Issue Printer](#)

Print Github issues on paper and stack them on your desk. Every time you close an issue and you can literally "bin" it! Things used in this project Hardware components Arduino MKR1000 × 1 Thermal Printer × 1 Software apps and online services Arduino Web...... Listed under: [Internet – Ethernet – LAN Projects](#), [Sensor – Transducer – Detector Projects](#)

151. [Image Processing Based Fire Detection & Extinguisher System Using Arduino](#)

This is an image processing based fire detection and extinguisher system using Arduino. It is basically the system is divided into two parts: Fire detection 2. Fire alert and extinguisher In the first part, fire detects using image processing. Here in this project I'm using...... Listed under: [Sensor – Transducer – Detector Projects](#)

152. [Indoor Air Quality Monitoring System](#)

An indoor air quality monitoring system for detecting toxic gases. Things used in this project Hardware components Arduino Yun Shield & Genuino Yun Shield × 1 Arduino Leonardo × 1 Arduino Yun × 1 Arduino MKR GSM 1400 × 1 Arduino MKR WAN 1300 ×...... Listed under: [Sensor – Transducer – Detector Projects](#)

153. [LED Straw XMAS Tree](#)

A simple, original and cheap Christmas tree made with LED-illuminated plastic straws that can be controlled over WiFi. Things used in this project Hardware components Arduino MKR1000 × 1 USB-A to Micro-USB Cable × 1 LED (generic) × 12 Resistor 330 ohm × 12 Software...... Listed under: [LED Projects](#)

154. [Light Animations Using Arduino and MATLAB](#)

Light animations are visually appealing and hence widely used for advertising purposes. In this project, we present a MATLAB-based graphical user interface (GUI) approach to control the glowing pattern of a number of light-emitting diodes (LEDs). Use of GUI is advantageous since the user can...... Listed under: [LED Projects](#)

155. [Interfacing a Laser LED with Arduino](#)

This project turns on and turns off a laser LED after every second. It can also monitor its own supply voltage level. The circuit can be extended for use as an audio-visual alarm system for security applications. Keyes KY-008 laser transmitter module is available at...... Listed under: [LED Projects](#)

156. [Snowbuddy](#)

Snowman replica that can chat with user to inform them whether outside temperature is safe for outdoor activity or not. Things used in this project Hardware components Arduino MKR1000 × 1 DHT22 Temperature Sensor × 1 Jumper wires (generic) × 1 Software apps and online...... Listed under: [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

157. [BLUE_P: Wireless Arduino Programming Shield](#)

Many times we make projects using Arduino, while working with it we need to connect it with PC to upload program using USB cable. In this tutorial, I'm going to replace this USB cable with a wireless programming shield. This shield is build using a...... Listed under: [Wireless Projects](#)

158. [Light your Bike, and use your Phone to Control It](#)

Arduino, NeoPixels, Firmata, and a Windows Phone (picked one up for $30 bucks) to control lighting. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Bluetooth Modem – BlueSMiRF Silver × 1 Adafruit NeoPixel Digital RGB LED Strip – White 30 LED...... Listed under: [LED Projects](#), [Projects](#)

159. [RFID Door Unlock](#)

Forgot your keys? Unlock the door using an RFID combination sequence from hidden tags. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit Metro Mini × 1 Adafruit Lockitron × 1 RFID reader (generic) I used a RFID-RC522 from ebay × 1...... Listed under: [Home Automation Projects](#), [Projects](#)

160. [Interfacing a Laser LED with Arduino](#)

This project turns on and turns off a laser LED after every second. It can also monitor its own supply voltage level. The circuit can be extended for use as an audio-visual alarm system for security applications. Keyes KY-008 laser transmitter module is available at…… Listed under: [LED Projects](#)

161. [Stylish IoT Neck Warmer Controlled from Mobile Browser](#)

The IoT version of a stylish neck warmer directly coming from this year's Fashion Weeks rolled into London, Paris and New York. Things used in this project Hardware components Arduino MKR1000 × 1 Alligator Clips × 1 Jumper wires (generic) × 1 Adafruit NeoPixel Digital…… Listed under: [LED Projects](#), [Projects](#)

162. [Paint Your Dimmer Switch on the Wall](#)

It's a dimmer switch! Create your own touch interface for controlling your Philips Hue lights using Bare Conductive's conductive paint. Things used in this project Hardware components Andium Anduino WiFi × 1 Bare Conductive Touch Board × 1 Philips hue × 1 Bare Conductive Electric…… Listed under: [Development Board – Kits Projects](#), [Projects](#)

163. [Multi-Sensor Data Plotting using Arduino IDE](#)

Monitoring of various process variables such as temperature, pressure, viscosity, humidity, pH and flow-rate is very important in steel plants, petrochemical and other such industries. The human-machine interface (HMI) at the operator station displays a continuous and real-time trending of process variables on a monitor…… Listed under: [Sensor – Transducer – Detector Projects](#)

164. [Teleoperated Robot for Sensing the Toxic Gases](#)

Remotely operated ground vehicle for sensing the toxic gases which is helpful for firefighters and researchers. Things used in this project Hardware components Arduino Yun × 1 Arduino MKR1000 × 1 Seeed Grove – Air quality sensor v1.3 × 1 Seeed Grove – Gas Sensor(MQ2)…… Listed under: [Projects](#), [Robotics – Automation Projects](#)

165. [Green Light: Fashion](#)

Ever wanted feedback on your new haute couture? Sprinkle a little IoT magic and get immediate critique on your fashion success or failure. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit NeoPixel Ring: WS2812 5050 RGB LED × 1 Software apps…… Listed under: [LED Projects](#), [Projects](#)

166. [GPS Clock using Arduino](#)

Global positioning system (GPS) synchronised clocks give accurate time. These clocks are universal and commonly used at railway stations, bus stands and airports. These are widely used for military purposes too. Here we describe a GPS clock based on Arduino Uno R3—an AVR ATmega328-based microcontroller…… Listed under: [Clock – Timer Projects](#), [GPS Based Projects](#)

167. [Interrupts Debouncing with Zerynth (Python for IoT)](#)

In this tutorial, we'll see the advanced feature of interrupt debouncing using Zerynth. Things used in this project Hardware components Arduino MKR1000 × 1 Jumper wires (generic) × 1 Software apps and online services Zerynth Studio Story

[embed]https://youtu.be/iX2AlezDPVE[/embed] https://www.youtube.com/watch?v=iX2AlezDPVE&feature=youtu.be In this tutorial, we'll use PWM...... Listed under: [Projects](#), [Tutorials](#)

168. [Smart Plastic Container](#)

A special container for store objects, iot-ready. It is able to keep track of stocks stored inside and notify when stocks are low! Things used in this project Hardware components SparkFun hx711 × 1 Adafruit Standard LCD – 16×2 White on Blue × 1 Arduino...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

169. [Optical Theremin Musical Instrument Using Arduino Uno Board](#)

Theremin is an early electronic musical instrument controlled without physical contact by the thereminist (performer). It is named after the Russian inventor, Léon Theremin, who patented the device in 1928. A typical theremin musical instrument is shown in Fig. 1. This article explains how you...... Listed under: [Game – Entertainment Projects](#)

170. [Smart City Project](#)

Open source air quality sensor network platform. Things used in this project Hardware components Arduino MKR1000 × 1 PMS5003 dust sensor × 1 Breadboard (generic) × 1 Male Header 40 Position 1 Row (0.1") × 1 SparkFun Snappable Protoboard × 1 Software apps and online...... Listed under: [Projects](#), [Security – Safety Projects](#), [Sensor – Transducer – Detector Projects](#)

171. [Pick to Light Project 2 WiFi](#)

In the second project in my pick to light, I am using WIFI to pass the data between PC and Arduino. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 2 Jumper wires (generic) × 1 SparkFun Pushbutton switch 12mm...... Listed under: [Projects](#), [Wifi – WLan Projects](#)

172. [Arduino-based Front Office Visitor Alarm](#)

This Arduino based visitor alarm is useful for offices, clinics and shops. It alerts you to the entry of a visitor by producing a beep sound every time the door is opened. The alarm automatically switches off after a few seconds. Circuit and working Circuit...... Listed under: [Clock – Timer Projects](#)

173. [Azure Stream Analytics saving lives!](#)

Azure Stream Analytics watches sensors, control device autonomously, send Tweets and alerts in case of a hazard. Controllable by smartphone. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Graphic LCD 84×48 – Nokia 5110 × 1 Texas Instruments LM2596 DC-DC 4.5-40V...... Listed under: [Projects](#), [Security – Safety Projects](#)

174. [Hackable Christmas Greeting Card](#)

In this post we will make a cool Christmas greeting card with the possibility of changing the music and much more, with Cayenne IoT. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 1 Buzzer × 1 Jumper wires (generic)...... Listed under: [How To – DIY – Projects](#), [Projects](#)

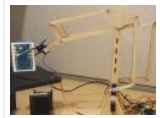175. [Arduino Projects: Audio VU Meter](#)

Presented here is an Arduino based audio meter that uses a liquid crystal display (LCD). A VU meter or standard volume indicator (SVI) is a device that displays a representation of signal level in audio equipment. In this project, the intensity of left-channel and right-channel audio signals…… Listed under: [Metering – Instrument Projects](#)

176. [Control your Human-Like Robot from Anywhere you Are!](#)

Buto is my 'real steel' robot project. Now, BuTO has been connected to the Internet and can be controlled remotely. Things used in this project Hardware components Arduino MKR1000 × 1 Arduino UNO & Genuino UNO × 1 Dynamixel Servo MX-64T × 2 Dynamixel Servo…… Listed under: [Projects](#), [Robotics – Automation Projects](#)

177. [Using IoT to Remotely Control a Robotic Arm](#)

Controlling a robotic arm to pick up and drop objects is difficult enough, without IoT it would be near impossible to do this remotely. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services MATLAB Arduino IDE Hand tools…… Listed under: [Projects](#), [Robotics – Automation Projects](#)

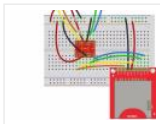178. [DC Motor Starter Using Arduino Uno Board](#)

Motor starter reduces the load, torque and current surge of a motor during startup. On starting, the motor takes more than five times the normal running current. This overheats the motor's armature winding and creates a sudden voltage dip in the power supply, which can…… Listed under: [Motor Projects](#)

179. [Singing Arduino](#)

Would you like to surprise someone with a song? Things used in this project Hardware components Arduino MKR1000 × 1 Buzzer × 1 5 mm LED: Red × 1 5 mm LED: Green × 1 Resistor 330 ohm × 1 Story Would you like to…… Listed under: [Game – Entertainment Projects](#), [Projects](#)

180. [SD Sketch Update](#)

How to use the new Arduino SDU library for SAMD boards to update the sketch on your board, putting it on an SD! Things used in this project Hardware components Arduino MKR1000 × 1 Arduino MKR Zero × 1 Arduino SD card × 1 Software…… Listed under: [LED Projects](#), [Projects](#)

181. [Interfacing Multiple LCDs With Arduino](#)

Here we describe interfacing of three 16×2 LCDs with common data lines to an Arduino Uno board. Four data lines of all the three LCDs are connected to digital pins of the Arduino Uno board but data displayed on each LCD is different. Circuit…… Listed under: [LCD Projects](#)

182. [Arduino NeoPixel Wifi](#)

An application to rule the neopixels all. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit NeoPixel Ring: WS2812 5050 RGB LED × 1 Story I love LEDs but as much as I love them, you have to manually pull the color…… Listed under: [LED Projects](#), [Projects](#), [Wifi – WLan Projects](#)

183. [Notification of Orders in Tindie](#)

When you have a new order in Tindie your Arduino warn you. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 1 Software apps and online services Tindie API Arduino IDE Hand tools and fabrication machines Laser cutter (generic) Story...... Listed under: How To – DIY – Projects, Projects

184. Arduino Based Digital IC Tester Using MATLAB

Testing of digital electronic systems generally involves applying a set of test stimuli to inputs of the device-under-test (DUT) and analyzing responses of the system using a response analyzer. If the DUT generates correct output responses (also called the golden response) for all the input...... Listed under: Development Board – Kits Projects

185. DRS Oil Container

An oil container that can automatically order new oil via Amazon DRS when the oil level in the container is low. Things used in this project Hardware components Arduino MKR1000 × 1 Ultrasonic Sensor – HC-SR04 (Generic) × 1 Jumper wires (generic) × 1 Software...... Listed under: Projects, Sensor – Transducer – Detector Projects

186. Home Temperature while you're on holiday …

When you are out of your home for Christmas Holiday you can visualize the Temp and Humidity values by your smartwatch using ArduinoMKR1000. Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 1 Breadboard (generic)...... Listed under: Projects, Temperature Measurement Projects

187. Controlling A Linear Actuator With An Arduino

There is a wide application of linear actuator where one wants to move something but they do not want to physically get involved in moving it. There are quite a number of ways to control linear actuators depending on the application and the user experience...... Listed under: Development Board – Kits Projects

188. Seat Monitor

Using ARTIK cloud to monitor cabin seat state. Things used in this project Hardware components Arduino MKR1000 × 1 Realtek Ameba RTL8195 Board × 1 ControlEverything.com Piezo Sensor × 1 Seeed Grove – Piezo Vibration Sensor × 1 Software apps and online services Samsung ARTIK...... Listed under: Projects, Sensor – Transducer – Detector Projects

189. Tack your Gait!

Everyone has a certain Gait-Rythtm! ..influenced by architecture and our surrounding. This Project should Tack your Gait and find yours. Things used in this project Hardware components Velostat, Linqstat × 1 SparkFun Bluetooth Modem – BlueSMiRF Silver × 1 Coppertape (narrow) × 1 cork 2mm...... Listed under: Bluetooth Projects, GPS Based Projects, Projects, Sensor – Transducer – Detector Projects

190. Generic STM32 board with Arduino

Described here is a simple way to load a program without bootloader. An additional thing needed is a USB to Serial/UART/TTL adapter (3.3V level). Connect the USB to Serial board as follows, and power up the STM32 board from a USB port/power supply. • RXD...... Listed under: Development Board – Kits Projects

191. [Spartan WiFi Pager System](#)

Simple Wifi pager system. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit Standard LCD – 16×2 White on Blue × 1 Story This project is an initial stage of the Spartan WIFI pager system (https://www.hackster.io/challenges/arduino-microsoft-maker/ideas/2421). First step in this stage is…… Listed under: [Projects](#), [Wifi – WLan Projects](#)

192. [Telegram Bot Library](#)

Host a Telegram Bot on your Arduino and chat with your brand new IoT device! Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Arduino Web Editor Story Learn how to use the Telegram Bot library, host a…… Listed under: [Projects](#), [Tutorials](#), [Wifi – WLan Projects](#)

193. [Arduino based Smartphone Controlled Robot Car](#)

Nowadays smartphones can be used to control a host of electrical and electronic devices including motors, music systems and lights. Here we present an Arduino based robot car, which can be controlled using an Android smartphone having ArduinoRC application installed in it. This bot receives…… Listed under: [Robotics – Automation Projects](#)

194. [IoT4Car (2)](#)

ObdiiUartMkrShield is a socket board for Arduino MKR board to talk with vehicles through ODB-II interface. Things used in this project Hardware components Arduino MKR1000 × 1 OSH Park Custom fabricated PCB × 1 Sparkfun – OBDII to DB9 cable × 1 Software apps and…… Listed under: [Car Projects](#), [Projects](#)

195. [Simple Water Quality Analysis](#)

An easy-to-build and low-cost water quality monitor. Things used in this project Hardware components Arduino MKR1000 × 1 Jumper wires (generic) × 5 Resistor 4.75k ohm × 2 Gold-Plated Pin × 7 Breadboard (generic) × 1 Software apps and online services Arduino IDE Story After…… Listed under: [Metering – Instrument Projects](#), [Projects](#)

196. [PC-based Oscilloscope Using Arduino](#)

Oscilloscopes are an essential tool for electronics hobbyists and professionals to verify that their designs would work as expected. PC-based oscilloscopes score over standalone oscilloscopes due to their compact size, low cost and ability to do offline analysis. Here we describe how you can make…… Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#)

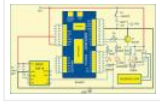197. [Christmas Presents Intruder Detector](#)

See when your kids move their presents! Detector sets off an audio alarm and sends an alert directly to your phone! Things used in this project Hardware components Arduino MKR1000 × 1 Solderless Breadboard Half Size × 1 Jumper wires (generic) × 1 Adafruit Piezo…… Listed under: [Home Automation Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

198. [Arduino Environmental Monitoring](#)

Periodically measure environmental conditions and send them to WolkAbout IoT Platform to monitor the environment remotely. Things used in this project Hardware components Arduino MKR1000 × 1 MikroElektronika Environment click × 1 Software apps and online services Arduino IDE WolkAbout IoT Platform Hand tools and...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

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199. [RFID Based Access Control Using Arduino](#)

RFID is a non-contact, automatic identification technology that uses radio signals to identify, track, sort and detect a variety of objects including people, vehicles, goods and assets without the need for direct contact or line-of-sight contact (as found necessary in bar code technology). RFID technology...... Listed under: [RFID – NFC projects](#)

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200. [Smart Connected Open Source Pot (Scopot)](#)

A Smart Pot that has all the component inside of the pot and gives the light and humidity data to the web Things used in this project Hardware components Arduino MKR1000 × 1 Solid State Relay × 1 Jumper wires (generic) × 1 Breadboard (generic)...... Listed under: [Other Projects](#), [Projects](#)

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201. [IoT Cloud – Getting Started](#)

Get familiar with the Arduino IoT Cloud and take your first steps into the world of connected objects. Things used in this project Hardware components Arduino MKR1000 A MKR1010 is also a perfect option, or you could use a MKR IOT Bundle (see below) ×...... Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#), [Tutorials](#)

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202. [Arduino Based Programmable Digital Data Display](#)

LCDs are widely used in applications like token-display machines in smalls and supermarkets, order number displays in restaurants and café, and so on. The project presented here demonstrates the working of Arduino based message display on LCD using Bluetooth.   Circuit and working This circuit...... Listed under: [Development Board – Kits Projects](#)

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203. [Keep Me Clean](#)

A sensor That detects when a diaper needs changing. Things used in this project Hardware components Arduino MKR1000 × 1 Story A Methane Sensor attached to an Genuino mkr1000 sends notifications to Azure when poop (methane) is detected for a period of time. Schematics Device...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

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204. [Solar UPS controller/automatic transfer switch](#)

Get your essential appliances off the grid with just one solar panel Things used in this project Hardware components Particle Spark Core × 1 Arduino Nano R3 × 1 Arduino MKR1000 × 1 Story [UPDATE] Now using MKR1000 to control the UNplug unit I replaced...... Listed under: [Development Board – Kits Projects](#), [Projects](#)

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205. [Arduino Based RGB Colour Code Generator](#)

Red, green and blue (RGB) are the basic colours for generatingvarious other colours by mixing colours in a particular proportion. This technique is used in TVs, mobiles etc. Similarly, Web designing using HTML or any other language requires the hex code of a particular colour...... Listed under: [LED Projects](#)

206. [IOT Lighted Xmas Tree](#)

Do you want to conserve energy and turn the Christmas tree lights on/off when not required? In IOT era, that can be done using MKR1000. Things used in this project Hardware components Arduino MKR1000 × 1 PowerSwitch Tail II × 1 Software apps and online…… Listed under: [Projects](#), [Tutorials](#)

207. [RGB Infinity Mirror with 3D Magnetic Sensor](#)

An infinity mirror with an RGB LED strip that can change its color using Infineon's 3D magnetic sensor knob connected to an Arduino MKR1000. Things used in this project Hardware components Infineon 3D Magnetic Sensor 2Go × 1 Arduino MKR1000 × 1 Darlington High Power…… Listed under: [LED Projects](#), [Projects](#)

208. [Humidity And Temperature monitoring Using Arduino With The IoT](#)

Using the Internet of Things (IoT) in homes and industries it is possible to control any electrical or electronic equipment. Moreover, you can get the information from any sensor and analyse it graphically or in any user-defined format from anywhere in the world. The IoT…… Listed under: [Sensor – Transducer – Detector Projects](#)

209. [Scheduled Relays](#)

This project will show you how to schedule to drive the outputs on a MKR Relay Proto Shield using a MKR1000! Things used in this project Hardware components Arduino MKR1000 × 1 Arduino MKR Relay Proto Shield × 1 Software apps and online services Arduino…… Listed under: [Projects](#), [Tutorials](#)

210. [WiFi Robot](#)

I have created the framework for WiFi and voice control of a robot. The MKR1000 chip enables us to receive controls over WiFi. Things used in this project Hardware components Arduino MKR1000 × 1 DC motor (generic) × 2 Wheels × 1 SparkFun Dual H-Bridge…… Listed under: [Projects](#), [Robotics – Automation Projects](#), [Wifi – WLan Projects](#)

211. [Wi-Fi Controlled Robot Using Arduino UNO And Blynk](#)

This Wi-Fi controlled robot can be controlled from anywhere using the ARMA IoT shield for UNO and the Blynk App which provides the user interface.   Overview Simple WiFi Controlled Robot Using ARMA IoT and Blynk! This project uses an Arduino Uno connected…… Listed under: [Wifi – WLan Projects](#)

212. [Worlds First Remote Control Human](#)

This project will allow you to control someone through the internet using the MKR1000 and Electric Muscle Stimulation also known as EMS. Things used in this project Hardware components General Purpose Transistor NPN × 2 Arduino MKR1000 × 1 Icy Hot Smart Relief Back and…… Listed under: [Medical – Health based Projects](#), [Projects](#)

213. [Salt Warehouses Monitoring with Arduino & Artik Cloud](#)

In this Article i will demonstrate how to connect Arduino MKR1000 with Artik Cloud & monitor salt/Dairy warehouses Temperature & Humidity. Things used in this project Hardware components Arduino MKR1000 × 1 DHT22 Temperature Sensor × 1 Jumper wires (generic) × 3 Breadboard (generic) ×…… Listed under: [Projects](#), [Temperature Measurement Projects](#)

214. [DIY: Arduino Chatting](#)

Networking is the one of the most important mean of communication used to communicate with people who are connected to one. Most of the available network communication modules in the market are not affordable by the overall end users. Considering this problem, a prototype has…… Listed under: [How To – DIY – Projects](#)

215. [Intel Edison as Azure IoTHub gateway](#)

Using Intel Edison as gateway and redirecting data from Arduimo MKR1000 to Microsoft Azure IoTHub. Things used in this project Hardware components Intel Edison × 1 Arduino MKR1000 × 1 Software apps and online services Microsoft Azure Arduino Web Editor Story Background Workshop project during…… Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

216. [IoT Christmas Tree Topper](#)

A cool star decoration for Chritmas Trees powered by Arduino MKR1000 Things used in this project Hardware components Arduino MKR1000 × 1 3 mm LED: Yellow × 16 Resistor 221 ohm × 4 Jumper wires (generic) × 8 Female header 8 position 2 row (2*4)…… Listed under: [Projects](#), [Tutorials](#)

217. [Road to Santa Claus](#)

Waiting for Santa? Count down to his arrival with this MKR1000 device. Things used in this project Hardware components Arduino Road to Santa Claus Kit × 1 Software apps and online services Arduino IDE Arduino Web Editor Hand tools and fabrication machines Vinyl glue…… Listed under: [GPS Based Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

218. [Wide Range Alarm System](#)

This is an alarm system based on the MKR1000 and a raspberry pi 2 or 3. The system will detect different alarms and notify you if necessary. Things used in this project Hardware components Arduino MKR1000 × 1 Raspberry Pi 2 Model B × 1…… Listed under: [Home Automation Projects](#), [Projects](#)

219. [Arduino as AVR Programmer](#)

For my project I need two Arduino boards, but I have only one Arduino Mega 2560 board (refer Fig. 1). I can either buy an Arduino Uno board (that costs approx. Rs. 1400 in India) or I can make an Arduino board using a fresh…… Listed under: [Development Board – Kits Projects](#)

220. [GoPRO Shutter](#)

Make your own custom GoPRO shutter using a MKR1000 board, 3 buttons and 3 LEDs. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 3 SparkFun Pushbutton switch 12mm × 3 Breadboard (generic) × 1 Jumper wires (generic) × 1…… Listed under: [LED Projects](#), [Projects](#), [Tutorials](#)

221. [Holiday Wreath Automation](#)

Automate your holiday wreath using an Arduino MKR1000, NeoPixels, and a buzzer. Get notified via SMS/email when someone is at the door. Things used in this project Hardware components Arduino MKR1000 × 1 NeoPixel strip × 1 Buzzer × 1 Breadboard (generic) × 1 Jumper…… Listed under: [Home Automation Projects](#), [Projects](#)

222. [My Home1000 Holiday Things for HOME Automation & Control](#)

Remotely we control our home with MKR1000 and IOT of Blynk. We can manage the boiler, the 'anti-theft irrigation, open the Automatic Gate. Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 2 SparkFun BMP180…… Listed under: [Home Automation Projects](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

223. [Arduino-Based Shadow Alarm](#)

Shadow alarms are usually used for protection against theft. A shadow alarm is a device that sounds an alarm when a shadow falls on it. Described here is a simple circuit of an Arduino-based shadow alarm. This compact shadow alarm unit is capable of sensing…… Listed under: [Clock – Timer Projects](#)

224. [Control a Lamp with MKR Relay Proto Shield](#)

Set an alarm with MKR1000 and MKR Relay Proto Shield to turn a lamp on/off. Things used in this project Hardware components Arduino MKR Relay Proto Shield × 1 Arduino MKR1000 × 1 Desktop Lamp × 1 Hand tools and fabrication machines Adafruit Wire Strippers…… Listed under: [Clock – Timer Projects](#)

225. [Arduino Piggyback on Raspberry Pi](#)

Arduino is a perfect mindless slave. Give it a job and it performs the task endlessly without defaulting even for a nano second. On the other hand, Raspberry Pi, or Raspi, is a computer that has a brain of its own. But, it may falter…… Listed under: [Sensor – Transducer – Detector Projects](#)

226. [Temperature Logger With Arduino And Artik Cloud](#)

Sending temperature from Arduino MKR1000 to Artik Cloud. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Samsung ARTIK Cloud for IoT Arduino IDE Story Hi, In this project find temperature using LM35 ic and post data into artik cloud. The…… Listed under: [Projects](#), [Temperature Measurement Projects](#), [Tutorials](#)

227. [My XL Wireless Photo Wall – PictureLED](#)

A project utilizing the mkr1000 and 960 ws2812b to display a picture on the wall, you take a photo with the smartphone and you can see it! Things used in this project Hardware components Arduino MKR1000 × 1 WS2812B x 60 1M led strip ×…… Listed under: [LED Projects](#), [Projects](#)

228. [Designing Smart Chatbot with IoT for home automation with videos (Hindi & English)](#)

In this project, we will be using ESP8266 12e manufactured by Lolin to make a Chatbot that can control our home applications. To chat with our chatbot, we will use Facebook messenger platform. Also, we will integrate some AI into our chatbot using Chatfuel. It will…… Listed under: [Home Automation Projects](#)

229. [Web Enabled 4 Wheeled Robot using a Photon](#)

Expanding upon MKR1000 based Robot project, I created this 4 wheeled Robot. Things used in this project Hardware components Particle Photon × 1 Adafruit Basic Robot Kit × 1 Amazon Web Services L298N × 1 Adafruit DC Motor in Servo Chassis × 4 Adafruit

Wheels...... Listed under: [Projects](), [Robotics – Automation Projects]()
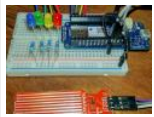
230. [Mini Christmas IoT Show!]()

Handmade MKR1000 IoT Christmas show made of colored cardboard paper. Things used in this project Hardware components Arduino MKR1000 × 1 DFRobot DFPlayer × 1 Speaker: 0.25W, 8 ohms × 1 LED (generic) × 10 Servos (Tower Pro MG996R) × 4 Software apps and online...... Listed under: [LED Projects](), [Projects]()

231. [Logging Sensor Data in MS EXCEL through MATLAB GUI]()

The measurement and analysis of process parameters such as temperature, flow, conductivity, speed, viscosity, and stress play a crucial role in providing information about the process/system under consideration. Parameter values are logged into a computer (using a process called data acquisition) and acquired data is...... Listed under: [Sensor – Transducer – Detector Projects]()

232. [Christmas Tree Water Level via Cayenne and MKR1000]()

When you have a 'real' Christmas tree, it is important to keep it watered. This project monitors the water level and emails alerts. Things used in this project Hardware components Arduino MKR1000 × 1 water level sensor × 1 LED (generic) × 4 Resistor 220...... Listed under: [Projects](), [Sensor – Transducer – Detector Projects]()

233. [With your Smart Phone and Arduino MKR1000 Blink a LED]()

The idea is to test the Arduino MKR1000, controlling the on board LED from your smart phone (this case iPhone SE. Hacksterlive Bogota. Things used in this project Hardware components Arduino MKR1000 × 1 Apple iPhone × 1 Software apps and online services Snappy Ubuntu...... Listed under: [LED Projects]()

234. [IoT Node with STM32F4 Discovery, MKR1000 and Azure IoT Hub]()

With MKR1000 and Azure IoT Hub, STM32F4 Discovery Board is used to send acceleration and other random telemetry data to Azure IoT Hub. Things used in this project Hardware components STMicroelectronics STM32F407G-DISC1 × 1 Arduino MKR1000 × 1 Software apps and online services AdaCore GNAT...... Listed under: [Internet – Ethernet – LAN Projects]()
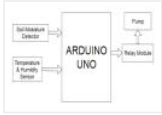
235. [Dual sharing RTC]()

Necessity I have an old window AC at my lab, situated at the terrace. The AC needs to be run intermittently more so often when I'm out of the station and the lab PC needs to be cooled down during the intense noon time when...... Listed under: [Development Board – Kits Projects]()

236. [Simulate GPS/Read Photoresistor with MKR1000/ADAFRUIT]()

"ADAFRUIT IO" makes IoT for everyone. Here we publish the data from a photo-resistor and a simulated GPS. Things used in this project Hardware components Arduino MKR1000 × 1 Photo resistor × 1 Resistor 1k ohm × 1 Software apps and online services Arduino IDE...... Listed under: [GPS Based Projects](), [Internet – Ethernet – LAN Projects]()

237. [Smart Irrigation System]()

This project is based on the AEIOU heuristic framework of Design Engineering Approach. Design for Performance, Safety and Reliability is ensured in terms of segregation of the low voltage and the high voltage parts of the circuit. Design for Manufacturability and Assembly is ensured in…… Listed under: [Irrigation Projects](#)

238. [Hello World with Arduino/Genuino MKR1000: Relay Board and AP](#)

Not the simple "Hello World" app but a semi-serious play with the MKR1000. Things used in this project Hardware components Arduino MKR1000 × 1 Relay (generic) × 1 Story I won a MKR1000 at the Hackster contest and I got it on my mailbox so…… Listed under: [Other Projects](#)

239. [Control MeArm Robot With MKR1000 And Your Smartphone](#)

This project allows you to control a MeArm Robot with your smartphone, as if you had many potentiometers in your hands. Things used in this project Hardware components Arduino MKR1000 × 1 Arduino UNO & Genuino UNO × 1 Adafruit Standard LCD – 16×2 White…… Listed under: [Robotics – Automation Projects](#)

240. [Tiny Wi-Fi Switch for $3](#)

Out of curiosity, I ordered the tiny ESP8266 relay switch from aliexpress.com but never knew it could be so embarrassing to find the right way to operate. The vendor said that the switching program is inbuilt and I only have to use some android phone…… Listed under: [Wifi – WLan Projects](#)

241. [IoT Wine-Tender-Arduino MKR1000!](#)

This circuit serves a wine using a mini water pump all controlled from your phone. Enjoy it during your holidays! Things used in this project Hardware components Arduino MKR1000 × 1 DC motor (generic) × 1 SparkFun Dual H-Bridge motor drivers L298 × 1 Software…… Listed under: [CNC Machines Projects](#), [Motor Projects](#)

242. [Monitor fridge with Arduino MKR1000 and thethings.iO](#)

To assure that your beer (and other) beverages are at a cool temperature, today we show you how to remotely monitor your fridge! Things used in this project Hardware components Arduino MKR1000 × 1 Temperature sensor DS18B20 × 1 Jumper wires (generic) × 3 Hand…… Listed under: [Metering – Instrument Projects](#), [Temperature Measurement Projects](#)

243. [Smallest IoT Home Automation using ESP8266 – 01 with Videos (Hindi & English)](#)

In this project, we will be using the ESP8266 – 01 Wi-Fi Development board to make asmall home automation that has Wi-Fi featured in it. The system operates on a local web server and is easy to use for the novice. With this project, we…… Listed under: [Home Automation Projects](#)

244. [Temperature Monitoring with Arduino MKR1000 and ARTIK Cloud](#)

Setup an Arduino MKR1000 board to read temperature data and send those readings to ARTIK Cloud for monitoring. Things used in this project Hardware components Arduino MKR1000 × 1 Temperature Sensor × 1 Software apps and online services Samsung ARTIK Cloud for IoT Story This…… Listed under: [Temperature Measurement Projects](#)

245. [Control your MKR1000 with aREST Framework](#)

You can control your MKR1000 remotely with a RESTFUL interface. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 2 Resistor 220 ohm × 2 Jumper wires (generic) × 5 Software apps and online services Arduino IDE Story It would…… Listed under: [LED Projects](#)

246. [Home Automation using Bluetooth of ESP32 with Videos (Hindi & English)](#)

In this project, we will be dealing with the inbuilt Bluetooth feature in ESP32 Development board and try to build an application around it. https://youtu.be/zZUs_GRprpY The Bluetooth system can be divided into two different categories: Classic Bluetooth and Bluetooth Low Energy (BLE). ESP32 supports dual-mode Bluetooth,…… Listed under: [Home Automation Projects](#)

247. [Arduino MKR1000 & Thinger](#)

A simple Internet of Things experiment, using an Arduino MKR1000 board to control two LEDs and monitor a potentiometer, via Thinger.io. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 2 Rotary potentiometer (generic) × 1 Breadboard (generic) × 1…… Listed under: [Internet – Ethernet – LAN Projects](#), [LED Projects](#)

248. [Arduino MKR1000 & Favoriot](#)

A simple IoT experiment, using an Arduino MKR1000 board to monitor a potentiometer and DHT11 sensor via Favoriot IoT platform. Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 1 Rotary potentiometer (generic) × 1…… Listed under: [Internet – Ethernet – LAN Projects](#)

249. [Arduino MKR1000 & Blynk](#)

A simple Internet of Things experiment, using an Arduino MKR1000 board to control two LEDs and monitor a potentiometer, via Blynk app. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 2 Rotary potentiometer (generic) × 1 Breadboard (generic) ×…… Listed under: [LED Projects](#)

250. [IoT and Touch-Based Home Automation with Video (Hindi & English)](#)

We have seen various applications of IoT but what about adding the touch to it. In this project, we will add simple touch buttons to the ESP-32 Wi-Fi module. https://youtu.be/C4kWwcpaJFE ESP-32 is a great module to design IoT applications and adding touch to it will make…… Listed under: [Home Automation Projects](#)

251. [Arduino Mkr1000 and Java Swing Shooting Game](#)

Arduino Mkr1000 + Uno + Leonardo + Java = Christmas shooting game. Things used in this project Hardware components Arduino UNO & Genuino UNO × 1 Arduino Leonardo × 1 Arduino MKR1000 × 1 3.7V battery × 1 HC-06 Bluetooth Module × 2 Arcade Button…… Listed under: [Game – Entertainment Projects](#)

252. [Internet of Things (IoT) LED Lamp with Video (Hindi & English)](#)

In this project, we handle the output pin of ESP32 for switching and dimming a DC LED lamp using a local Web server. For a local Web server, we do not need an Internet connection; we can handle everything over Wi-Fi. To make this work, we use…… Listed under: [LED Projects](#)

253. [Arduino MKR1000 + Android + Relay = Christmas gift lock](#)

Santa is here but you need to guess your gift's password! It's a great starting point if you're new to Arduino MKR1000, networking & Android Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 1 Jumper wires (generic) × 1...... Listed under: [Phone Projects](#), [Wifi – WLan Projects](#)

254. [Arduino MKR1000 Kit](#)

Best in Class Arduino MKR1000 Controller. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Arduino IDE Arduino MKR1000 Kit – Android Apple Arduino MKR1000 Kit – iOS Story This tutorial will focus on how to control and...... Listed under: [Phone Projects](#)

255. [Vehicle Tracking System Based on GPS and GSM](#)

Presented here is an Arduino-based vehicle tracking system using global positioning system (GPS) and global system for mobile communication (GSM) modules. GSM modem with a SIM card used here uses the communication technique of a regular cellphone. The system can be installed or hidden in...... Listed under: [Sensor – Transducer – Detector Projects](#)

256. [Arduino MKR1000/Zero Neopixel Throwie](#)

A WiFi controlled NeoPixel display. Designed for the MKR1000 but should work for the Zero too. A little rough around the edges but works! Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit NeoPixel Ring: WS2812 5050 RGB LED × 1 Adafruit...... Listed under: [LED Projects](#)

257. [DogWatcher (MKR1000)](#)

This is MKR1000/Windows 10 based device to keep your dog out of areas he should not be in by sounding an alarm and taking his photo. Things used in this project Hardware components Arduino MKR1000 × 1 Raspberry Pi 2 Model B You can use...... Listed under: [Sensor – Transducer – Detector Projects](#)

258. [ARTIK + MKR1000 + DHT11 + MQTT](#)

An IOT app which make uses of ARTIK Cloud, Genuino MKR1000, DHT11 temperature and humidity sensor and MQTT protocol. Things used in this project Hardware components Arduino MKR1000 × 2 DHT11 Temperature & Humidity Sensor (4 pins) × 1 LED (generic) × 2 Software apps...... Listed under: [Other Projects](#), [Sensor – Transducer – Detector Projects](#)

259. [4x4x4 RGB LED Cube](#)

This article describes how to build a 4x4x4 RGB LED CUBE (Fig. 6) that is controlled by Arduino. Cube construction We need 64 common cathode RGB LEDs for our cube. Test all LEDs before soldering. Bend all the leads out 90 degrees apart as shown...... Listed under: [LED Projects](#)

260. [Arduino MKR1000 – DHT – Artik cloud](#)

Sending temperature and humidity from Arduino MKR1000 to Artik Cloud Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 1 Software apps and online

services Samsung ARTIK Cloud for IoT Arduino IDE Story Background This…… Listed under: [Development Board – Kits Projects](#), [Other Projects](#)
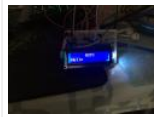
261. [IoT Power Tracker for Your Home](#)

The power tracker is an IOT based device that helps us to keep track of our power consumption. It also alerts us when we are exceeding the power usage limit. With this device, we don't have to wait until the end of the month to…… Listed under: [Home Automation Projects](#)

262. [Arduino MKR1000 Weather Station](#)

Weather station monitors temperature, pressure, light, dust, soil moisture values and displays on the OLED screen and Cayenne dashboard. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit TSL2561 Luminosity Sensor × 1 Adafruit BMP180 Barometric Pressure/Temperature × 1 OLED display I2C…… Listed under: [Development Board – Kits Projects](#), [Projects](#)

263. [MKR1000 Message of the Day](#)

Use Arduino MKR1000 and a LCD to set the message of the day. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit Standard LCD – 16×2 White on Blue × 1 Software apps and online services Arduino IDE Story I wanted to…… Listed under: [Arduino LCD Project Ideas](#), [Other Projects](#)

264. [Iot Home Automation Using ESP-32 with Videos (Hindi & English)](#)

Back in earlier days, when the word Internet of Things (IoT) was not a sound bite, developers of this field used various Wi-Fi shields to enable the Wi-Fi feature in their development boards. Following this, in 2014, the low-cost Wi-Fi enabled chip ESP-01 caught everyone's…… Listed under: [Home Automation Projects](#)

265. [MKR1000 with Windows 10](#)

Arduino MKR1000 with Windows 10 remote arduino using Wifi connection. Things used in this project Hardware components Arduino MKR1000 × 1 Hand tools and fabrication machines wifi router Story Hello everyone. First I want to say that this project is for the world's largest Arduino…… Listed under: [Wireless Projects](#)

266. [MKR1000 Christmas IoTree with Cayenne Project Builder](#)

Automate your Christmas tree and get notified when motion is detected around the tree! Things used in this project Hardware components Arduino MKR1000 × 2 PIR Motion Sensor (generic) × 1 Jumper wires (generic) × 1 Relay (generic) This is a really easy relay to…… Listed under: [LED Projects](#), [Other Projects](#)

267. [DC Power Meter for 0-55V 20A Work Bench Power Supply](#)

This project describes how to make a low-cost DC power meter that can be used for displaying Voltage, current, power and the running time of operation. This is useful and can be used as the display for your bench power supply too. This can be…… Listed under: [Metering – Instrument Projects](#)

268. [MKR1000 to ThingSpeak.com](#)

A fairly simple project that attaches everyone's favorite environmental monitor, the DHT, to the Arduino MKR1000 then transmits sensor data. Things used in this project Hardware components DHT11 Temperature & Humidity Sensor (4 pins) Arduino MKR1000 Story I had already developed code for the ESP8266...... Listed under: [Sensor – Transducer – Detector Projects](), [Temperature Measurement Projects]()

269. [MKR1000 Unboxing and Testing (7 Steps)]()

The first run and the first troubles with the Arduino MKR 1000. FAQ. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Arduino IDE Story Finally I've got the board Genuino/Arduino MKR1000. It was well packed and fast shipped....... Listed under: [LED Projects]()

270. [Temperature Monitoring on Smartphone]()

This article describes a temperature monitoring system on an Android smartphone. Temperature is sensed by a temperature sensor installed in the circuit and is sent over Bluetooth to the smartphone. An Android application is used in the smartphone to display temperature data. The system provides...... Listed under: [Sensor – Transducer – Detector Projects]()

271. [MKR1000 RGB Strip Controller]()

Using the power of a winning idea, an MKR1000, and a TLC5940 to add RGB lighting to my workspace. Things used in this project Hardware components Arduino MKR1000 Texas Instruments TLC5940 12V 30A Power Supply Software apps and online services Microsoft Visual Studio 2015 Arduino...... Listed under: [LED Projects]()

272. [Ultimate 6V powering board you will ever need!]()

(AllNewsStories Editorial):- Ahmedabad, Mar 5, 2019 (Issuewire.com) – The board we are talking about is a perfect solution for powering the 6V systems like Arduino and Raspi. The device will be live on Indiegogo soon. Arduino, Raspberry Pi and other development boards have gained much...... Listed under: [Battery Projects]()

273. [MKR1000 Connecting to the WiFi (3 steps)]()

How to connect the Arduino MKR 1000 with the WiFi. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Arduino IDE Story How to connect the MKR 1000 with the WiFi? – It's easier than you think. The...... Listed under: [Wireless Projects]()

274. [Build Your Own Digital Weighing Machine]()

This article describes how to build a simple and low-cost digital kitchen weighing machine, which can measure weight of up to five kilograms. This digital weighing machine is easier to design. For a heavy-duty weighing machine like your bathroom scale, just change the load cell...... Listed under: [Metering – Instrument Projects]()

275. [MKR1000 Temp and Humidity Sensor]()

Send temperature and humidity data from an Arduino MKR1000 to Microsoft Azure. Things used in this project Hardware components Arduino MKR1000 Arduino MKR1000 × 1 DHT22 Temperature Sensor DHT22 Temperature Sensor × 1 Software apps and online services Microsoft Azure Microsoft Azure Arduino IDE Arduino...... Listed under: [Sensor – Transducer – Detector Projects](), [Temperature Measurement Projects]()

276. [MKR1000 Pushover Status](#)

Send status messages of your MKR1000 via Pushover service to your mobile phone, etc. Things used in this project Hardware components Arduino MKR1000 Story An IoT node must be trimmed to reduce current consumption due to battery life. A WiFi-based node as Arduino MKR1000 needs…… Listed under: [Wifi – WLan Projects](#), [Wireless Projects](#)

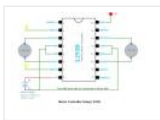277. [Microcontroller Projects: Fridge Temperature and Humidity Indicator](#)

We can measure temperature and humidity inside the fridge using a normal temperature-humidity indicator but relative humidity (RH) could be inaccurate in that case. The moment the fridge door is opened, RH will shoot up due to ingress or egress of moisture in the surroundings……. Listed under: [Sensor – Transducer – Detector Projects](#)

278. [ESP32 Internet Radio](#)

The cheap MP3 VS1053 codec processor from aliexpress.com is told to be capable of decoding a variety of music formats, including Ogg Vorbis/MP3/AAC/WMA/MIDI audio. VS1053 is also capable of recording in Ogg Vobis file but all the guidance that is available on Internet are either…… Listed under: [Radio Projects](#)

279. [Weather Forecasting on ESP32](#)

In any power utility corporation ash dyke management is a huge issue. For fugitive dust control huge sprinklers that spray water all along the dry portion of the dyke are used but maintenance of these sprinklers is a problem as we really don't have any…… Listed under: [Sensor – Transducer – Detector Projects](#)

280. [Automatic Railway Gate for Unmanned Railway Crossing](#)

The aim of this project is to save lives of people who are crossing unmanned railway crossings; by providing an automatic railway gate solution. There are many accidents occurred and lives are lost while crossing the unmanned railway crossings in India. Materials Used: Wood Thermocol…… Listed under: [Sensor – Transducer – Detector Projects](#)

281. [Reaction Time Game](#)

This reaction time game tests the time taken by two players to react, and declare the fastest one as a winner. To do this I am using external interrupts and pin change interrupts in atmega328p. It gives four chance to each play, time of each…… Listed under: [Game – Entertainment Projects](#)

282. [Connected Message Lamps using ESP8266 | IoT Projects](#)
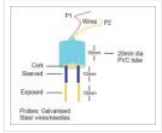
It is not just another Engraved LED lamp that you see on the market nowadays. This is an advanced version of that lamps. In the era of connected devices, I have made my own connected lamps. This project is inspired by Filimin: A Wi-Fi Enabled Touch Light That…… Listed under: [LED Projects](#)

283. [Getting started with NodeMCU development board for IoT](#)

Since Internet of Things (IoT) projects are now quite popular, I recently bought a NodeMCU board to try IoT application development. The NodeMCU development board is an open source board based on ESP8266EX microcontroller with integrated Wi-Fi transceiver. Uploading programs to NodeMCU from any computer...... Listed under: [Development Board – Kits Projects](#)

284. [Digital Soil Moisture Meter](#)

A digital soil moisture meter is used for indicating the water content of a given soil sample. [caption id="attachment_31551" align="alignright" width="300"] Soil moisture sensor head[/caption]   As crop production requires water at different stages and in different amounts, it is important to measure soil moisture...... Listed under: [Metering – Instrument Projects](#)

285. [Ultra-Low-Power Sensor Hub Using nRF24L01 Modules](#)

Presented here is an ATmega328P microcontroller-based ultra low power sensor hub using nRF24L01+ radio frequency (RF) transceiver modules having transmitter and receiver units. The transmitter sends humidity and temperature values of a place to the receiver kept at a remote location for display on an...... Listed under: [Sensor – Transducer – Detector Projects](#)

286. [Simple Event Counter](#)

Microcontroller based miniscule event counter presented here is based on the inexpensive Digispark Attiny development board. One advantage of this design is that any type of active or passive switch can be connected to its trigger input. Whenever the switch closes event will be counted...... Listed under: [Metering – Instrument Projects](#)

287. [How to Play with Pancake Vibration Motors](#)

Nowadays numerous electronic devices make use of vibrotactile feedback to increase user interaction with the help of suitable haptic feedback hardware like the eccentric rotating mass motors, linear resonant actuators, and piezoelectric actuators. The most popular type of eccentric rotating mass (ERM) motor inside of...... Listed under: [Motor Projects](#)

288. [Short-Range FM Radio Station](#)

This article shows you how to build a small radio station at home and share music with others. The station can also be used for making announcements in colleges, industries, hospitals, schools and other places using a condenser mic amplifier circuit. In this project an...... Listed under: [Radio Projects](#)

289. [Line Frequency Meter Based On Reciprocal Counting](#)

Precise measurement of line signal frequency is very important in many applications, especially in the management of power grid systems. Tasks like calibration of governors of engines that run generators in power plants need a resolution up to 0.01Hz. Frequency is also an important parameter...... Listed under: [Metering – Instrument Projects](#)

290. [Voice-Controlled Home Automation System](#)

This is a project for a voice controlled home automation system to control appliances with your voice through an Android app. An Arduino Mega board is used for controlling the relay through which an appliance is switched on/off. You can modify the Android app

to...... Listed under: [Home Automation Projects](#)

291. [LDR Based DC Motor Speed Control](#)

A light-dependent resistor (LDR) whose resistance is inversely proportional to the intensity of light is often used as a sensor in electronic projects that involve the use of light. This LDR based DC motor speed control project uses an LDR to control the speed of...... Listed under: [Motor Projects](#)

292. [IoT-Enabled Air Pollution Meter With Digital Dashboard On Smartphone](#)

Presented here is a IoT enabled air pollution meter to monitor air quality on your smartphone using Blynk application and Arduino board. Blynk is an Internet of Things (IoT) platform to control Arduino, Raspberry Pi and the like over the Internet. In this project Blynk...... Listed under: [Metering – Instrument Projects](#)

293. [Controlling A Robotic Car Through MATLAB GUI](#)

This project presents the implementation of a MATLAB based graphical user interface (GUI) to control the movement of a robotic car. The commands to move the car in forward, reverse, right and left directions are sent from the GUI and processed by Arduino Uno board...... Listed under: [Robotics – Automation Projects](#)

294. [Microcontroller Projects: Sonar Water-Level Meter](#)

Three-fourths of the earth is water, out of which 97 per cent is saline (in oceans, seas and groundwater). The remaining 2.5 per cent to 2.75 per cent is fresh water , out of which 1.75 per cent to two per cent is frozen in...... Listed under: [Metering – Instrument Projects](#)

295. [Sequential Tilt-Motion Lock](#)

Here is a project for locking and unlocking with a tilt sensor by tilting it in a defined sequence. It uses an accelerometer module to detect the tilt motion. If the sequence matches with the predefined motion sequence, the lock opens. You can build this...... Listed under: [Security – Safety Projects](#)

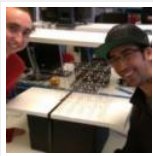296. [Analogue Input on Raspberry Pi](#)

While you can connect your analogue input/output devices to Arduino very easily, it is not so easy with Raspberry Pi (Raspi). There are no analogue GPIO pins on Raspi; all GPIOs of Raspi are digital. Circuit diagram of an analogue sensor on Raspi However, simple...... Listed under: [Other Projects](#)

297. [Serial LCD Module](#)

In most electronic systems, it is necessary to provide information in the visual form for a convenient user interface. The most commonly used displays in electronic systems are LED, LCD and TFT. Amongst these, an LCD display is the most cost-effective solution as it can...... Listed under: [LCD Projects](#)

298. [RGB LED Cube with Sound to Light Capabilities](#)

The objective of our final project was to build a 5x5x5 RGB LED cube that can display a certain color depending on the frequency of music playing. There are two main components of this project. [gallery columns="2" size="medium" ids="31240,31241"] The first part is the hardware…… Listed under: [LED Projects](#)

299. [Magnetometer Parking Sensor](#)

The objective of our project was to develop a wireless sensor device to be used for detecting motor vehicles, along with their direction of travel. The sensor is to be used in a larger system to monitor parking lot traffic by counting ins and outs…… Listed under: [Sensor – Transducer – Detector Projects](#)

300. [Balance Beam Controller](#)

The purpose of our final project was to create an unstable system that would allow us to investigate classical control design methods by controlling the system using a microcomputer. [gallery columns="2" size="medium" ids="31225,31226"] This was accomplished by creating a teeter-totter that pivoted around a central…… Listed under: [Sensor – Transducer – Detector Projects](#)

301. ["The Note is Right" Pitch Tuning Game](#)

The objective of this project is to provide a multiplayer "pitch tuning" game in which the computer can determine the frequency of players' input notes. [gallery columns="2" size="medium" ids="31217,31218"] The system guides two users through various states in which they are each given the chance…… Listed under: [Game – Entertainment Projects](#)

302. [Digital Multimeter](#)

The purpose of this project was to design a functioning digital meter to measure voltage, current, and resistance to a known accuracy. The project involved the integration of hardware and software to take an input measurement signal from a pair of high and low leads…… Listed under: [Metering – Instrument Projects](#)

303. [Four Channel Temperature Controller](#)

For our final project, we designed a 4-channel temperature controller using PID control. The system was designed to monitor and regulate the temperature of four individual channels by applying 120V to heating elements using on/off switching. [gallery columns="2" size="medium" ids="31204,31205"] This switching was indirectly manipulated…… Listed under: [Sensor – Transducer – Detector Projects](#)
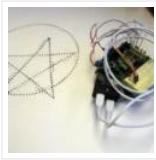
304. [Anti-Collision (Wall Hugging) Robot](#)

Our project consists of a vehicle designed to avoid collisions with objects and walls. The vehicle achieves this through the use of an onboard sensor to determine when such an object was close by. [gallery columns="2" size="medium" ids="31197,31198"] After recognizing an object within a certain…… Listed under: [Robotics – Automation Projects](#)

305. [Pushbutton → Push Notification](#)

How many mundane devices upgrade to IoT because they let you monitor a single data point or a variable? That little nudge over the communication precipice allows you to charge 500% more. Now, if you are as handy as a Hackaday reader, you can throw…… Listed under: [Wifi – WLan Projects](#)

306. The Picture Drawing Robot

The desired outcome of our final project was to create an autonomous robot that was programmed to move through a series of figures, then stop. Due to time constraints we limited the robot to " drawing " two figures, a five pointed star as well…… Listed under: Robotics – Automation Projects

307. Alarm System

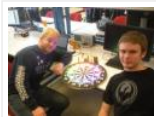The objective of our project was to create an alarm system that could detect an intruder using an IR motion sensor. We used a keypad so the user could enter their password to arm and disarm the system. [gallery columns="2" size="medium" ids="31154,31155"] We also included…… Listed under: Clock – Timer Projects

308. Home Energy Monitor

The purpose of the Home Energy Monitor Final Project is to give people a better idea how much electrical power they consume in a residential system. [gallery columns="2" size="medium" ids="31149,31148"] The method used for this application will utilize a clip on noninvasive current sensor on…… Listed under: LCD Projects

309. RGB LED Strip Clock

For the final project we made an analog style clock with an Arduino microcontroller. To do this we used three major components: an RGB LED Strip, a DeadOn RTC, and a custom user interface. The LED strip is used to set the display around the…… Listed under: LED Projects

310. ReFlex Reaction Game

We decided to construct a game for our final project for Microcomputer Architecture. The game, which we named Reflex [gallery columns="2" size="large" ids="31137,31138"] is a simple player versus player reaction game in which the winner is rewarded with a drink of their choice, poured into…… Listed under: Game – Entertainment Projects

311. RGB LED Grid

This project involved creating a red, blue, green (RGB) light emitting diode (LED) matrix that displayed the colors of the rainbow. The colors of the rainbow were chosen to show the full color spectrum that the LEDs are capable of, while still giving distinct variation…… Listed under: LED Projects

312. Smart Aquarium

The goal of our project is to display the status of a previously implemented smart aquarium. The previously implemented system includes an external power supply, Arduino Uno, Ethernet Shield, ULN2803 driver, 4 120V AC relays, and 4 controlled 120V AC receptacles, and a servo motor…… Listed under: Game – Entertainment Projects

313. 8 Best Arduino Starter Kit for Beginners

Best Arduino Starter Kit Arduino Starter Kit from Arduino Elegoo Uno Project Super Starter Kit with Tutorial for Arduino Vilros Arduino Uno 3 Ultimate Starter Kit SunFounder Project Super Starter Kit for Arduino Osoyoo Ultimate Starter Kit for Arduino with Mega2560 and UNO R3 Board…… Listed under: Development Board – Kits Projects
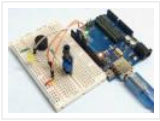
314. [Oct Home Automation using ESP8266 & Blynk App – IoT](#)

A home automation system is an automating the bulk of electronic and electrical tasks within a home. It uses a combination of hardware and software to enable control and management over appliances and devices within a home. Home automation not only refers to reduce human efforts but also energy…… Listed under: [Home Automation Projects](#)

315. [Interfacing Flame Sensor with Arduino to Build a Fire Alarm System](#)

In this article we interface Flame Sensor with Arduino and learn all the steps to build Fire Alarm System by using Arduino and flame sensor. Flame sensor module has photodiode to detect the light and op-amp to control the sensitivity. It is used to detect fire and provide HIGH signal upon…… Listed under: [Sensor – Transducer – Detector Projects](#)

316. [DIY Arduino Motor Driver Shield](#)

In this DIY session, we make an Arduino Motor Driver Shield to drive DC motors, stepper motor and Servo Motor. Compatible with Arduino UNO and Arduino Mega, this motor driver shield can operate 4 DC motors or 1 stepper motor and 2 servo motors at a time. Here two L293D…… Listed under: [How To – DIY – Projects](#)

317. [Record and Play 3D Printed Robotic Arm using Arduino](#)

Record and Play 3D Printed Robotic Arm using Arduino Robotic Arms have proved themselves useful and more productive in many applications where speed, accuracy and safety is required. But to me, what's more than that is these things are cool to look at when they…… Listed under: [Robotics – Automation Projects](#)

318. [Arduino Based Real-Time Oscilloscope](#)

Arduino Based Real-Time Oscilloscope The Oscilloscope is one of the most important tools you will find on the workbench of any electronics engineer or maker. It is primarily used for viewing waveform and determining voltage levels, frequency, noise and other parameters of signals applied at…… Listed under: [Development Board – Kits Projects](#)
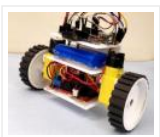
319. [Controlling Arduino with Raspberry Pi using pyFirmata](#)

Controlling Arduino with Raspberry Pi using pyFirmata Although Raspberry Pi and Arduino are two different hardware in terms of their applications and structure, but they both are considered as two competing open source hardware platforms. They both have very strong community and support. Today we will slightly change…… Listed under: [Development Board – Kits Projects](#)

320. [DIY Self Balancing Robot using Arduino](#)

After being inspired by RYNO motors and other self balancing scooters from Segway, I always wanted to build something similar. Thinking for while, I decided to build a Self Balancing Robot using Arduino. This way I would be able to grasp the underlying concept behind all…… Listed under: [Robotics – Automation Projects](#)

321. [Arduino Wattmeter: Measure Voltage, Current and Power Consumption](#)

As electronics engineers, we always depend upon meters/instruments to measure and analyse the working of a circuit. Starting with a simple multimeter to a complex power quality analysers or DSOs everything has their own unique applications. Most of these meters are readily available and can...... Listed under: [Metering – Instrument Projects](#)

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322. [LC Meter using Arduino: Measuring Inductance and Frequency](#)

All embedded lovers are familiar with multimeter which a great tool to measure voltage, current, resistance etc. A multimeter can measure them easily. But sometimes we need to measure inductance and capacitance which is not possible with a normal multimeter. There are some special multimeters...... Listed under: [Metering – Instrument Projects](#)

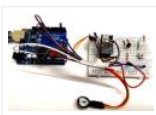323. [Analog Speedometer Using Arduino and IR Sensor](#)

Measuring the speed/rpm of a Vehicle or a motor has always been a fascinating project to try. In this project, we are going to build a Analog Speedometer using the Arduino. We will use IR Sensor module to measure the speed. There are other ways/sensors for...... Listed under: [Sensor – Transducer – Detector Projects](#)

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324. [Arduino Based Guitar Tuner](#)

Hi guys, during the last few weeks, I've been working on reconnecting with my love for the guitar. Playing the box guitar was how I relax few years back before the saxophone took over. Going back to the guitar, after 3 years of rarely strumming...... Listed under: [Sound – Audio Projects](#)

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325. [IoT Based Patient Monitoring System using ESP8266 and Arduino](#)

IoT based Patient Monitoring System using ESP8266 and Arduino Health monitoring is the major problem in today's world. Due to lack of proper health monitoring, patient suffer from serious health issues. There are lots of IoT devices now days to monitor the health of patient...... Listed under: [Medical – Health based Projects](#)

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326. [Interfacing nRF24L01 with Arduino: Controlling Servo Motor](#)

Arduino NRF24L01 Tutorial to Control Servo Motor While Internet of things (IoT), Industry 4.0, Machine to Machine communication etc are getting increasingly popular the need for wireless communication has become incumbent, with more machines/devices to speak with one another on the cloud. Designers use many...... Listed under: [Motor Projects](#)

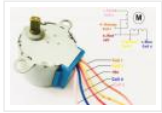327. [Smart Phone Controlled Arduino Mood Light with Alarm](#)

Smart Phone Controlled Arduino Mood Light with Alarm I recently purchased the Neo Pixel LED strip and was quite impressed by the way it works. The tiny LED's have an inbuilt driver IC which helps us to control each LED individually and can produce a wide spectrum...... Listed under: [Clock – Timer Projects](#), [LED Projects](#), [Phone Projects](#)

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328. [DC Motor Control Using MATLAB and Arduino](#)

In this tutorial, we will show you how to control DC motor using MATLB and Arduino. If you are new with MATLAB then it is recommend to get started with simple LED blink program with MATLAB. Creating MATLAB Graphical User Interface for controlling DC Motor After finishing...... Listed under: [Motor Projects](#)

329. [Stepper Motor Control using MATLAB and Arduino](#)

Stepper motors is a brushless DC motor that rotates in discrete steps, and are the best choice for many precision motion control applications. Also, stepper motors are good for positioning, speed control and applications which require high torque at low speed. In previous tutorials of MATLAB,...... Listed under: [Motor Projects](#)

330. [Interfacing LabVIEW With Arduino](#)

Interfacing LabVIEW With Arduino In previous article of Getting Started with LabVIEW, we have seen about LabVIEW and how it can be graphically programmed and executed in computer (software level). Now in this article we learn about How to Interface LabVIEW with Arduino Board. Requirements To interface...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#)

331. [ARDUINO NANO ANDROID ROBOT PROJECT QIK2S9V1 XBEE BLUETOOTH](#)

Android robot project built on the Arduino Nano sumo the Sumo robot motor control Qik2s9v1 dual serial motor controller module, Xbee for communication via your Android phone with Bluetooth module is being used. The... Electronics Projects, Arduino Nano Android Robot Project Qik2s9v1 Xbee Bluetooth"arduino projects, avr project,...... Listed under: [Robotics – Automation Projects](#)

332. [GUITAR TUNING PROJECT WITH ARDUINO UNO](#)

Arduino Uno kit on the Board at the entrance of the TL082 opamp used Guitar Tuning circuit audio audio input and frequency to detect the "Arduino-Frequency-Detection" software used. According to the LEDs light at... Electronics Projects, Guitar Tuning Project with Arduino Uno "arduino projects, avr project, microcontroller projects, "...... Listed under: [Sound – Audio Projects](#)

333. [ARDUINO UNO ROBOTIC ARM PROJECT](#)

The Robot arm is controlled with the computer 6 servo motor used robotic arm system, built on the Arduino Uno is not more complex, additional links to make the robot arm mechanics portion of... Electronics Projects, Arduino Uno Robotic Arm Project "arduino projects, avr project, microcontroller projects, " The...... Listed under: [Robotics – Automation Projects](#)

334. [ENC28J60 ETHERNET MODULE FOR ARDUINO KIT](#)

Arduino Kits can be merged with the Arduino Ethernet module is based on the materials used in the design of the PCB DIP ENC28j60 SMD No 3 .3V regulator is used for the material,... Electronics Projects, ENC28j60 Ethernet Module For Arduino Kit "analog circuits projects, arduino projects, microcontroller...... Listed under: [Internet – Ethernet – LAN Projects](#)

335. [Making of the Holiday Lantern](#)

Making a Holiday Lantern for which I can change its 'outfits' to different theme depending on the holiday seasons. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit NeoPixel Ring: WS2812 5050 RGB LED × 2 Power Bank × 1 Software apps...... Listed under: [LED Projects](#)

336. [ARDUINO UNO WITH INTERESTING CLOCK PROJECT](#)

I've shared this with different time interesting projects carried out with the Arduino Uno this time, I think the most interesting thing isn't debatable kullanışlımı project but the idea as a different kind of... Electronics Projects, Arduino Uno With Interesting Clock Project "arduino projects, avr project, microcontroller projects, "...... Listed under: [Clock – Timer Projects](#)

337. [SPECTRUM ANALYZER CIRCUIT ARDUINO UNO](#)

the Arduino Uno module held with MAX7219 8×8 LED matrix display module graphic equalizer spectrum analyzer and the filter driver in the project 2 integration of MSGEQ7. In addition, with Arduino MAX7219 for code... Electronics Projects, Spectrum Analyzer Circuit Arduino Uno "arduino projects, microcontroller projects, " the Arduino Uno module held...... Listed under: [LED Projects](#)

338. [Domotic Greenhouse](#)

Electronic greenhouse controlled real-time, because the environmental conditions change continuously, so we need an efficient monitoring. Things used in this project Hardware components Arduino MKR1000 × 1 Arduino UNO & Genuino UNO × 1 DHT22 Temperature Sensor × 1 Arduino Wifi Shield 101 × 1...... Listed under: [Irrigation Projects](#), [Wireless Projects](#)

339. [USB CNC PROJECT ARDUINO UNO](#)

Arduino uno USB module is controlled via the circuit built on a CNC, which supports the SVG image format in post format, used CNC motor driver L298N motor driver Arduino Uno for the project... Electronics Projects,USB CNC Project Arduino Uno "arduino projects, microcontroller projects, " Arduino uno USB module...... Listed under: [CNC Machines Projects](#)

340. [Say Thanks to all Courteous Drivers](#)

Ever want to say thanks to the nice person who just let you in line? I have thought a lot about that, and here is my solution. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Bluetooth Modem – BlueSMiRF Silver ×...... Listed under: [LED Projects](#), [Phone Projects](#)

341. [HANDMADE MEMBRANE KEYPAD, AND THE ARDUINO APPLICATION](#)

The author has done a beautiful job with handmade membrane is quite an original view is a little tricky, but it works in the prototype experiments, a thin copper foil pieces of the paper... Electronics Projects,Handmade membrane keypad, and the Arduino application "arduino projects, microcontroller projects, " The...... Listed under: [Development Board – Kits Projects](#)

342. [CarSmart](#)

Smart cloud-based vehicle OBD-II diagnostics logging and analysis using Azure IoTHub, Stream Analytics, and Machine Learning. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun OBD-II-UART This board requires only three connections. I soldered pins and use wire wrap to connect to...... Listed under: [Car Projects](#)
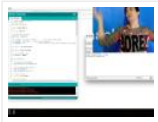
343. [Thundercatch IoT Network](#)

Monitor lightning activity and get alerted on dangerous situations. Things used in this project Hardware components Arduino MKR1000 × 1 MikroElektronika Thunder click × 1 Female/Female Jumper Wires × 1 Software apps and online services Microsoft Azure Microsoft Visual Studio 2015 Arduino IDE Story Introduction…… Listed under: [Projects](), [Sensor – Transducer – Detector Projects]()

344. [PIANO SOUND CONTROLLED RGB LED AMBILIGHT ARDUINO MEGA]()

As far as I know the system first began to be used in the image on the computer monitor Ambilight the most intense color, whatever color changes the LEDs accordingly when I find a… Electronics Projects, Piano sound controlled RGB LED ambilight Arduino Mega "arduino projects, microcontroller projects, "…… Listed under: [Sound – Audio Projects]()

345. [The Ugliest Sweater]()

In the maker world, only boredom is truly ugly. Prevent boredom with horrible, smart flashy lights!!! Things used in this project Hardware components Arduino MKR1000 × 1 LED string lights (battery-powered) × 1 General Purpose Transistor NPN I used the PN2222A (bought from Adafruit). ×…… Listed under: [How To – DIY – Projects]()

346. [Alexa Controlled Door Sign Demo]()

Use Alexa to tell your door sign what message to display. Things used in this project Hardware components Arduino MKR1000 × 1 Waveshare 200×200, 1.54inch E-Ink display module × 1 18650-Type Lithium Ion Battery (generic) × 1 18650-Type Battery Holder (generic) × 1 Breadboard (generic)…… Listed under: [Projects](), [Wifi – WLan Projects]()

347. [DRAWING ROBOT MATLAB ARDUINO UNO PROJECT]()

Drawing robot Arduino Uno module is built on a parts kit that was used for the mechanical part of servo motor 3 except that the toy is being used. Generate image data of the… Electronics Projects, Drawing Robot Matlab Arduino Uno Project "arduino projects, microcontroller projects, " Drawing robot Arduino…… Listed under: [Robotics – Automation Projects]()

348. [Liquid Laundry Detergent DRS Sensor (LaundryBot)]()

Never run out of liquid laundry detergent again with this Amazon DRS enabled liquid laundry detergent sensor, a.k.a. LaundryBot. Things used in this project Hardware components Arduino MKR1000 × 1 Pololu VL6180X Time-of-Flight Distance Sensor Carrier with Voltage Regulator × 1 Adafruit Standard LCD -…… Listed under: [Projects](), [Sensor – Transducer – Detector Projects]()

349. [SPECTRUM ANALYZER CIRCUIT ARDUINO RGB LED STRIP]()

the spectrum analyzer circuit a project of Arduino Duemilanove Module 7-band graphic equalizer on board sound on the ground floor MSGEQ7 used to integrate MSGEQ7 is a very talented 8-pin ICS in the frequency…Electronics Projects, Spectrum Analyzer Circuit Arduino RGB Led Strip "arduino projects, microcontroller projects, " the spectrum…… Listed under: [LED Projects]()

350. [Make SMART Your Washing Machine]()

If also you, like me, put your vest on the washing machine and wait the best moment for wash the clothes… make SMART your Washing Machine. Things used in this project Hardware components Arduino MKR1000 × 1 Tilt Sensor Switch × 1 Software apps and…… Listed

under: [How To – DIY – Projects](#), [Projects](#)

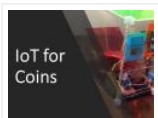351. [Store Your Sensitive Data Safely When Sharing a Sketch](#)

If there is sensitive data that you want to keep private when sharing a sketch, add a secret tab and store your private info there! Things used in this project Software apps and online services Arduino Web Editor Arduino IDE Story Often in your sketch,…… Listed under: [Security – Safety Projects](#)

352. [ARDUINO UNO FM AM TRANSMITTER CIRCUIT SI4713](#)

The most important part is the construction of a functional sample of a Arduino Uno software-defined one transmitter. After agreement with the supervisor and current options, she was elected concept with SI4713 digital circuit… Electronics Projects, Arduino Uno FM AM Transmitter Circuit SI4713 "arduino projects, microcontroller projects, " The…… Listed under: [Radio Projects](#)

353. [IoT for coins](#)

Need to organize your coins? Get some help with this project. Things used in this project Hardware components Arduino MKR1000 × 1 ATX Power Supply × 1 Adafruit coin acceptor × 1 Adafruit Proto Screw Shield × 1 Adafruit GRAPHIC ST7565 POSITIVE LCD (128X64) WITH…… Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#), [Tutorials](#)

354. [The Sensometer: 22+ Sensors](#)

This is the "Sensometer", a great example of IoT! Get all sensors working at once! Things used in this project Hardware components Arduino MKR1000 × 1 Arduino Mega 2560 & Genuino Mega 2560 × 1 Real Time Clock (RTC) × 1 ProtoCentral Pulse Oximeter &…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

355. [LED POV CLOCK ARDUINO PRO MINI](#)

The Arduino led pov clock circuit has been an interesting project, and the author has made use of the arduino feeding system with the popular wireless energy transmission method, which is an additional circuit…Electronics Projects, Led Pov Clock Arduino Pro Mini "arduino projects, led projects, microcontroller projects, "…… Listed under: [Clock – Timer Projects](#)

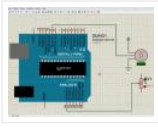356. [Project "Gallon" – Smart Drinking Water Monitoring Platform](#)

This project is a platform for drinking water monitoring and analytics, consists of IoT device, cloud, and mobile and web app. Things used in this project Hardware components Arduino MKR1000 × 1 PCF8574 × 1 AC-DC Module 5V 500mA × 1 10 Segment LED Bar…… Listed under: [Metering – Instrument Projects](#), [Projects](#), [Wifi – WLan Projects](#)
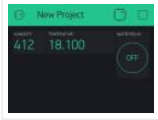
357. [Gestured Controlled Smart Home](#)

Not only this project has all the Smart Home features but it also includes MYO gesture control, allowing control of lights with your arm. Things used in this project Hardware components Myo Gesture Control Armband Armband used to detect arm gestures and control different hardwares…… Listed under: [Home Automation Projects](#), [Projects](#)

358. [ARDUINO LIBRARY FILES PROTEUS](#)

The Proteus simulation program works especially well for testing microcontroller projects, but at least it gives some insight. Proteus libraries for Arduino Arduino Proteus Models Proteus Arduino Mega1280 Proteus Arduino UNO Proteus Arduino Pro... Electronics Projects, Arduino Library Files Proteus "arduino projects, " The Proteus simulation program works especially...... Listed under: [Arduino Programmer Projects](#)

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359. [Monitor and control your irrigation system with a mobile app](#)

Create your Blynk mobile app to monitor your garden and activate the irrigation. Things used in this project Hardware components Arduino MKR1000 × 1 Seeed Grove – Relay × 1 Arduino Rural Hack Kit × 1 Software apps and online services Blynk Story In this...... Listed under: [Irrigation Projects](#), [Projects](#)

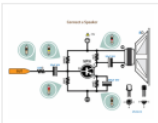360. [LoRa gateway and node boards run on Raspberry Pi power](#)

Pi Supply is Kickstartering Iot LoRa Gateway and IoT LoRa Node pHAT add-ons for the Raspberry Pi, as well as a LoRa Node that works with the Micro:bit. An Arduino node is also in the works.Pi Supply, which has produced a variety of Raspberry Pi...... Listed under: [Wireless Projects](#)
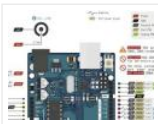
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361. [BALANCE ROBOT ARDUINO UNO](#)

Previously shared " Analog Balance Robot "project using Arduino Uno . Motor drive SparkFun Ardumoto this module is based on the L298 motor drive integration SMD materials are used because the size of the...Electronics Projects, Balance Robot Arduino Uno "arduino projects, " Previously shared " Analog Balance Robot "project using Arduino...... Listed under: [Robotics – Automation Projects](#)

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362. [ARDUINO EXTERNAL CIRCUIT CONNECTION CHARTS](#)

Arduino transistors, LEDs, motors, MOSFETs, various electronic components, circuit connection diagrams that will be of great use for Arduino projects, Arduino circuits or those who are new to Arduino programming ... Circuit diagrams are... Electronics Projects, Arduino External Circuit Connection Charts "arduino projects, " Arduino transistors, LEDs, motors, MOSFETs,...... Listed under: [Motor Projects](#)

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363. [ATMEL ARDUINO COLORED CONNECTION CHART](#)

Projects or schematics, drawings that will work when preparing pcb Atmel AVR Microprocessors Information Tags for "Share" drawings directly on Atmel microcontrollers. Colored linking expansions are more comprehensible for those dealing with Atmel Series... Electronics Projects, Atmel Arduino Colored Connection Chart "arduino projects, " Projects or schematics, drawings that...... Listed under: [Other Projects](#)

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364. [esp8266/Arduino NTC library](#)

A thermistor is a type of negative coefficient resistor whose resistance is dependent on temperature, more so than in standard resistors. The resistance of a NTC Negative Temperature Coefficient thermistor (https://en.wikipedia.org/wiki/Thermistor) decreases as temperature rises. The Steinhart-Hart Thermistor Equation or the Beta Model Equation can be used to correlate the thermistor resistance...... Listed under: [Temperature Measurement Projects](#)

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365. [Smart Garage](#)

Change the way you operate your garage! Things used in this project Hardware components Arduino MKR1000 × 1 GY-521 MPU-6050 3 Axis Gyroscope + Accelerometer Module For Arduino × 1 Ultrasonic Sensor – HC-SR04 (Generic) × 1 SSD1306 OLED I2C Display × 1 Relay (generic)…… Listed under: [Home Automation Projects](#)

366. [PuzzleBox](#)

Protect your valuables with a puzzle! Things used in this project Hardware components Arduino MKR IoT Bundle × 1 Software apps and online services Blynk Story Keeping your valuable items away from prying eyes can be hard sometimes, unless you put it in a big…… Listed under: [Security – Safety Projects](#)

367. [Love You Pillow](#)

Open source is love, and so are hugs! Things used in this project Hardware components Arduino MKR IoT Bundle × 1 Software apps and online services Telegram Story We all know that being without that special person in your life can be difficult, but…… Listed under: [Other Projects](#)

368. [Home Automation System for a Camp with Cellular Internet](#)

Wouldn't it be nice if you could start warming up the camp before you leave the house? How about using Alexa to do it for you! Things used in this project Hardware components Amazon Alexa Echo Dot × 1 Arduino MKR1000 × 1 ControlEverything.com Relay…… Listed under: [Home Automation Projects](#)
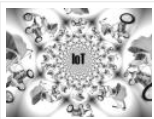
369. [Wi-Fi Power Toggler](#)

Restores your Wi-Fi connection for you, so you don't have to, and keeps a track of how often this is done. Things used in this project Hardware components Arduino MKR1000 × 1 DFRobot DF Robot Lithium Polymer Battery (1000mAh, 3.7V) × 1 Jumper wires (generic)…… Listed under: [Wifi – WLan Projects](#)

370. [Did You Ever Want to Have a Video Doorphone?](#)

Recycle your old cellphone to build one and connect it by a browser to your new phone, PC or tablet! Things used in this project Hardware components Arduino MKR1000 × 1 ICStation UNO × 1 2.8 TFT Shield for Arduino Uno × 1 Breadboard (generic)…… Listed under: [Home Automation Projects](#)

371. [Baby-Pram Monitoring System](#)

Real time monitoring variables like temperature, X-Y-Z acceleration, sound and light intensity for baby-pram. Things used in this project Hardware components MMA7260 × 1 LM92 × 1 Breadboard (generic) × 1 Electret microphone × 1 Arduino MKR1000 × 1 max4236 × 1 Photocell × 1…… Listed under: [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

372. [A DIY Smart Insole to Check Your Pressure Distribution](#)

The smart insole collects foot pressure data in real-time. Through Thinger.io the information is fed into a system that visualizes the data. Things used in this project Hardware components Arduino MKR1000 × 1 Force Sensitive Resistor I've used Interlink model 402 × 3 OpenBuilds Wire…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

373. [Smart IOT Propane Monitoring Pedestal](#)

Smart IOT Propane Pedestal capable of tracking propane level as well as detecting any propane leaks. Integration with Amazon Alexa. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Load Sensor 50kg × 4 SparkFun Logic Level Converter – Bi-Directional × 1…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

374. [Crypto Miner](#)

Monitor your crypto mining hardware temperatures and hash rates with the ability to restart the rig remotely as well as Alexa integration. Things used in this project Hardware components Arduino MKR1000 × 1 Raspberry Pi 3 Model B × 1 Temperature probe (ds18b20) × 5…… Listed under: [Projects](#), [Temperature Measurement Projects](#)

375. [Wi-Fi RC Car – Qi Enabled](#)

This is a project that will show you how to create a Wi-Fi controlled RC Car that will recharge wirelessly while it is parked. Things used in this project Hardware components IDT Qi 5W Transmitter Prototype Kit × 1 IDT Qi 5W Receiver Prototype Kit…… Listed under: [Projects](#), [Wireless Projects](#)

376. [DIY Arduino Relay Driver Shield](#)

In this DIY project we make a 3-Channel Arduino Relay Shield Circuit for relay based applications. We designed an isolated PCB for 3 relays. By using this Arduino Relay Shield, we can operate 3 AC appliances at a time. We have put a two pin screw terminal blocks (Neutral, NO)…… Listed under: [Other Projects](#)

377. [IoT Based Electricity Energy Meter using ESP12 and Arduino](#)

We all know about Electricity energy meters which are installed in everyone's house or offices to measure the electricity consumption. At last of every month, many of us get worried about the high electricity bill and we have to look at the energy meter once…… Listed under: [Wifi – WLan Projects](#)

378. [Smart Thermostat](#)

Connect your home heater to Internet and chat with it via Telegram! Things used in this project Hardware components Arduino MKR1000 × 1 DHT22 Temperature Sensor × 1 SparkFun Pushbutton switch 12mm × 3 Resistor 10k ohm × 4 LCD screen × 1 Software apps…… Listed under: [Projects](#), [Temperature Measurement Projects](#)

379. [What is Brushless DC Motor (BLDC) and How to Control it with Arduino](#)

Building stuff and getting them work, the way we want, has always been sheer fun. While that being agreed, building stuff that could fly would defiantly pump a bit more anxiety among the hobbyists and hardware tinkerers. Yes! I am talking about Gliders, Helicopters, Planes…… Listed under: [Motor Projects](#)

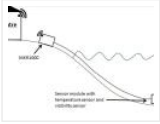380. [Weather Station for Drones](#)

The project consists of a kit for drones that includes an electronic device that functions as a meteorological station. Things used in this project Hardware components Arduino MKR1000 or Arduino/Genuino Zero + Arduino wifi shield 101 × 1 DHT22 Temperature Sensor × 1 Jumper wires…… Listed under: [Drone](#), [GPS Based Projects](#), [Projects](#)

381. [What is Rotary Encoder and How to Use It with Arduino](#)
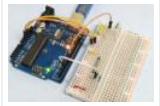
A Rotary encoder is an input device which helps the user to interact with a system. It looks more like a Radio potentiometer but it outputs a train of pulses which makes its application unique. When the knob of the Encoder is rotated it rotates…… Listed under: [LCD Projects](#)

382. [Visibility sensor for divers](#)

Planning a scuba dive will be much easier with the data of visibility sensors on the divespot. Things used in this project Hardware components LED (generic) Make sure the LED is bright enough × 1 Adafruit TSL2591 × 1 Adafruit Waterproof DS18B20 Digital temperature sensor…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

383. [Reed Switch Interfacing with Arduino](#)

Reed switch is used in many of the real-life applications such as magnetic door switch, laptops, smartphones etc. In this article, we learn about Reed Switch and guide you to Interface a Reed Switch with Arduino. Reed Switch Reed switch is basically an electrical switch which is…… Listed under: [Phone Projects](#)

384. [Viseesaw](#)

Viseesaw uses the figure of a seesaw, to show metaphorically the inequality of two physical, conceptual or social realities. Things used in this project Hardware components Arduino MKR1000 × 1 Breadboard (generic) × 1 Adafruit Motor/Stepper/Servo Shield for Arduino v2 Kit – v2.3 × 1…… Listed under: [Motor Projects](#), [Projects](#)

385. [RFID Based Attendance System – Learn to Build Yourself](#)

An RFID based Attendance System is a very interesting project which can be used in different places say in Schools to register the attendance of students and teachers, Private organizations to tabulate monthly working hours of employees and automatically calculate salary based on the number…… Listed under: [LCD Projects](#)

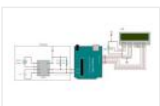386. [Program MKR Over-the-Air + Goodies: Voice Control, etc.](#)

Secure OTA via Azure. Control via voice capable UWP app. Includes sample: room thermostat controlled via phone. Things used in this project Hardware components Arduino MKR1000 This is needed for every OTA projects. The components below are needed only for the use case / sample:…… Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

387. [Smart LCD Brightness Control using Arduino and LDR](#)

Smart LCD with Automatic Brightness Adjusting Using Arduino and LDR Sensor Here is a simple Arduino project that focuses on adjusting the brightness of an LCD screen whenever there isn't sufficient light in a room. The Arduino reads the surrounding light intensity using an LDR sensor. …… Listed under: [LCD Projects](#)

388. [Arduino Real Time Clock using DS1307 RTC Module](#)

In this article, we are going to build an Arduino Real Time Clock using DS1307 RTC Module and 16×2 LCD module for display. First of all, let's see how to interface RTC Module to Arduino. There are different kinds of RTC modules available in the market……. Listed under: [Clock – Timer Projects](#)

389. [Door Sensor](#)

Monitor if the door or the valve gas is open… or if someone opened the cookie jar! Things used in this project Hardware components Arduino MKR1000 × 1 Li-Ion Battery 1000mAh optional × 1 OpenBuilds Micro Limit Switch × 1 Software apps and online services…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

390. [DIY Arduino Weather Station using Nokia Display](#)

Learn to Build Arduino Weather Station using DHT11, Soil Sensor, and Nokia Display In this project tutorial, we are going to make an Arduino weather station using 2 sensors; FC-28 soil moisture sensor to measure the moisture and the DHT22 sensor to measure the temperature, humidity…… Listed under: [Sensor – Transducer – Detector Projects](#)

391. [Adaptable Sensor and Notification System](#)

A easy to use adaptable sensor and notification system that is designed to be used as a temporary change of state notifier. Things used in this project Hardware components Arduino MKR1000 × 1 PIR Motion Sensor (generic) × 1 SW-420 Motion Sensor Module Vibration Switch…… Listed under: [Arduino Programmer Projects](#), [Internet – Ethernet – LAN Projects](#), [Projects](#)

392. [Nokia 5110 LCD and Arduino – Ultimate Tutorial and Guide](#)

Interfacing Nokia 5110 LCD Display To Arduino In this article, we are publishing a project tutorial which explains different aspects of interfacing a Graphical LCD (GLCD) Nokia 5110 with Arduino. Nokia 5110 is a 48 x 84 graphic LCD that has an internal controller…… Listed under: [Phone Projects](#)

393. [DC Motor Speed Control using GY 521 Gyro/Accelerometer and Arduino](#)

In this article, we are going to control two motors by using the GY-521 accelerometer module. The speed of the motor will increase or decrease upon moving the GY-521 module up or down. On moving the Gy-521 towards the downside, the speed of the first…… Listed under: [Motor Projects](#)

394. [Codename RGB](#)

Remotely control your RGB LED strip from your pc. Things used in this project Hardware components Arduino MKR1000 × 1 Power MOSFET N-Channel Might be something similar. × 3 RGB Led Strip Make sure its 12v dc (if Its not 12v you will have to…… Listed under: [LED Projects](#), [Projects](#)

395. [Automatic Irrigation System using Arduino](#)

In this project, we are going to build an automatic irrigation system using Arduino which senses the moisture of the soil and opens or closes the valve according to the moisture value. The moisture value and the valve status is shown on the Nokia 5110…… Listed under: [LCD Projects](#)

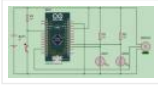396. [Spinning or Rotating LED Display using Arduino POV](#)

Designing a Spinning/Rotating LED Display In this project, we are going to show you how to make a simple "Rotating LED Display" (also popularly known as Spinning LED Display) with Arduino. The motivation to make this project came to my mind when I saw a…… Listed under: [LED Projects](#)

397. [BBC Micro Online](#)

BBC Micro connects to WiFi, accesses games over the Internet. Things used in this project Hardware components Arduino MKR1000 × 1 BBC Micro model B (Acorn Computers) × 1 27C256 EPROM × 1 SparkFun Level Shifter Board × 1 Texas Instruments Hex Schmitt-Trigger Inverter ×...... Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

398. [Arduino Solar Tracker Using LDR Sensor & Servo Motor](#)

Arduino Solar Tracker Solar energy is one of the fastest growing industries in the world; today more than 65 GW energy is produced by solar power. Since solar energy is renewable, it is a good power source, especially for developing countries. In this project, I...... Listed under: [Motor Projects](#)

399. [Plant Monitoring System](#)

Real time plant monitoring system to view temperature, light exposure and moisture. Things used in this project Hardware components Arduino MKR1000 × 1 Breadboard (generic) × 1 Temperature Sensor × 1 Photo resistor × 1 Moisture sensor × 1 Resistor 10k ohm × 1 Software...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

400. [Rain Sensing Wiper using Arduino and Servo Motor](#)

Automatic Rain Sensing Wiper Using Arduino This project is designed to build a car wiper that automatically detects the rainfall intensity and regulates the frequency of wiper operation. It is built, using Arduino UNO board. A rain sensing module is used for measuring the intensity...... Listed under: [Motor Projects](#)

401. [Ultrasonic Blind Walking Stick Using Arduino](#)

Ultrasonic Blind Walking Stick According to the WHO, about 30 million people are estimated to be permanently blind worldwide. These people are totally dependent on others. They even cannot walk on their own. We have created designed and built an "Ultrasonic Blind Walking Stick" device...... Listed under: [Sensor – Transducer – Detector Projects](#)

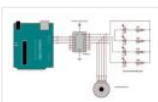402. [Automatic Railway Gate Control Using Arduino & IR Sensor](#)

About a million people have died over the past 5 years in unmanned railway crossings all over the world. At least 1/3rd of the railway crossings are unmanned due to their remote placement and less traffic. The Automatic Railway Gate Control System using IR Sensor...... Listed under: [Sensor – Transducer – Detector Projects](#)

403. [Amazon Dash Replenishment Pens](#)

A pen holder that determines when there are two or less pens and triggers an Amazon pen set replacement. Things used in this project Hardware components Arduino MKR1000 × 1 Crayola Air Dry Clay × 1 OpenBuilds Micro Limit Switch × 5 Software apps and...... Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#), [Tutorials](#), [Wifi – WLan Projects](#)

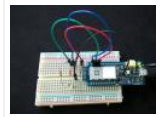404. [Interfacing Stepper Motor to Arduino](#)

In this article, we are publishing a project which explains different aspects of interfacing a Stepper Motor with Arduino. Stepper motor is a specially designed DC motor which comes with advantages of both a servo motor and a normal dc motor. Compared to a normal...... Listed under: [Motor Projects](#)

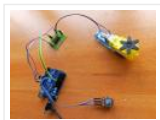405. [LinkIt™ Smart 7688 Smart Room](#)

This Project will demonstrate you to control & monitor your room through my custom designed responsive web app. Things used in this project Hardware components MediaTek Labs LinkIt Smart 7688 Duo × 1 DHT22 Temperature Sensor × 1 Resistor 10k ohm × 1 Resistor 221...... Listed under: [Home Automation Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#)

406. [Remote LED Mood Setter](#)

Set LED RGB light Scenes remotely Things used in this project Hardware components Arduino MKR1000 × 1 Breadboard (generic) × 1 RGB Diffused Common Cathode × 1 Story Using MKR1000 to control an RGB LED device. In our shortened example we will use a single...... Listed under: [LED Projects](#), [Projects](#)

407. [Arduino Gear Motor Interface Using IC L293D](#)

In this article, we are publishing a project which explains different aspects of Arduino-Gear motor interface. Gear motor is a specially designed DC motor whose gear assembly helps in increasing the torque and reducing the speed. Compared to a normal DC motor, maximum rpm a...... Listed under: [Motor Projects](#)
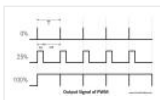
408. [Hot Cocoa 3000](#)

Oh the weather outside is frightful, but hot cocoa is so delightful, so let's order some hot cocoa on the go! An Arduino MKR1000 project. Things used in this project Hardware components Arduino MKR1000 × 1 Water Pump NOTE! THIS AND MANY OF THE OTHER...... Listed under: [Other Projects](#), [Projects](#)

409. [Limb Shaker](#)

A stepper motor shakes a limb to frighten away birds and squirrels. It is under the control of the MKR1000. Things used in this project Hardware components DC motor (generic) × 1 Arduino MKR1000 × 1 Story The project uses a stepper motor to pull...... Listed under: [Motor Projects](#), [Projects](#)

410. [DC Motor Speed Control Using Arduino & PWM](#)

Speed control of DC motor with PC Interface is an easy DIY project. In this project DC motor's speed is controlled by sending the command through PC. Arduino is directly connected to PC through the USB cable and command is given to Arduino on serial...... Listed under: [Motor Projects](#)

411. [PlantAnalyzer](#)

A device which collects data (environmental, soil and photosynthesis values) of plant(s) and then stores/analyze using a MKR1000 and Azure. Things used in this project Hardware components Arduino MKR1000 × 1 ADAFRUIT SD CARD READER × 1 ARDUCAM 5MP OV5642 × 1 SparkFun Weather Shield...... Listed under: [Projects](#), [Wifi – WLan Projects](#)

412. [Project: Car Speed Detector Using Arduino](#)

Car speed Detector Project In this project I am going to show you how to measure the speed of running car (or man) from outside. Police department uses this type of system to prevent over speed of vehicles. Our project is a little different from...... Listed under: [LCD Projects](#)
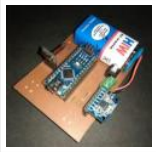
413. [Getting weather data](#)

With this tutorial, you will learn how to get the weather data from a web service to your Arduino. Things used in this project Hardware components Arduino MKR1000 × 1 Story In this tutorial we would make use of the WiFiConnection of our mkr1000. We...... Listed under: [Metering – Instrument Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#), [Tutorials](#)

414. [Project: Gesture Controlled Mouse (Air Mouse) Using Arduino & Accelerometer](#)

AIR Mouse is also called gesture-controlled mouse and it works based on hand gesture. In this project an accelerometer is used for measuring the tilt of hand in X and Y direction and moves the cursor according the tilt. In the project two types of...... Listed under: [Battery Projects](#)

415. [Mind Control Drone](#)

Learn how to lift-off a drone with your mind and a hacked controller using a MindWave sensor, Arduino MKR1000 and Processing. Things used in this project Hardware components Arduino MKR1000 × 1 Micro Racing Drone × 1 Capacitor 100 μF × 4 Resistor 221 ohm...... Listed under: [Drone](#), [Projects](#)

416. [DIY: Measuring Wheel/Surveyor's Wheel Using Arduino & Rotary Encoder](#)

DIY: Measuring Wheel/Surveyor's Wheel Using Arduino & Rotary Encoder A surveyor's wheel may also be known by other names like: clickwheel, hodometer, waywiser, trundle wheel, measuring wheel or a perambulator. All these devices serve a single purpose, which is, measuring distance. The origin of surveyor's...... Listed under: [LCD Projects](#)

417. [Project: Auto Intensity Control Of Street Light Using Arduino](#)

Auto Intensity Control Of Street Light Using Arduino In this project, I am going to show you how to control the intensity of LED lights according to the time and the light intensity of outer atmosphere. This is an amazing and very useful project because...... Listed under: [LED Projects](#)

418. [Control the Position of a Continuous Rotation Servo via WiFi](#)

Position control using wifi from a smartphone sounds too good to be true? Do it with MKR1000. Things used in this project Hardware components Arduino MKR1000 × 1 Hand tools and fabrication machines 3D Printer (generic) Story Many position control use steppers because they are...... Listed under: [Projects](#), [Wifi – WLan Projects](#)

419. [Project: Home Automation Using IR Remote Control](#)

Arduino-Remote Control Home Automation In this project, we are going to show you how to control home appliances using a TV Remote. This same principle can be applicable in offices and industries as well. The project deals with the automation of four home appliances, like...... Listed under: [Wireless Projects](#)

420. [Smartphone Controlled Atomic Weather Station](#)

This project combines Atomic Time keeping with local weather station, and additional cool projects using Arduino and Raspberry Pi. Things used in this project Hardware components Arduino UNO & Genuino UNO × 1 Raspberry Pi 2 Model B × 1 Adafruit Ultimate GPS Breakout ×…… Listed under: [GPS Based Projects](#), [Projects](#)

421. [Create Mobile Apps for Android and iOS Connecting to the MKR](#)

This simple project shows how to make an app that controls an Arduino MKR1000 board with Evothings Studio by communicating over the TCP. Things used in this project Hardware components Arduino MKR1000 × 1 LED (generic) × 1 Resistor 100 ohm × 1 Jumper wires…… Listed under: [Arduino Programmer Projects](#), [Projects](#), [Wireless Projects](#)

422. [Arduino Mega Tutorial – Pinout & Schematics](#)

  First of all, Why Arduino Mega? When cheaper boards are available, why go with Arduino Mega? The main reason behind this is the additional features that are inbuilt with this board. First feature is the large I/O system design with inbuilt 16 analog transducers and…… Listed under: [Pinouts](#)

423. [DasFilisera Green House](#)

Be kind to your plants! Learn about the green house environment using MKR1000 and sensors. Control soil humidity and air conditions! Things used in this project Hardware components DHT22 Temperature Sensor × 1 DS18B20 × 1 Soil temperature and humidity sensor FS200-SHT25 × 1 4-Channel…… Listed under: [Other Projects](#), [Projects](#), [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

424. [Arduino Nano Tutorial – Pinout & Schematics](#)

  Arduino Nano Pinout The Arduino Nano, as the name suggests is a compact, complete and bread-board friendly microcontroller board. The Nano board weighs around 7 grams with dimensions of 4.5 cms to 1.8 cms (L to B). This article discusses about the technical specs most importantly…… Listed under: [Pinouts](#)

425. [One Button to Rule Them All](#)

Learn how to connect a simple web app written in JavaScript to Arduino Cloud. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun big dome red button × 1 Software apps and online services Arduino Web Editor Arduino Cloud Story Following this…… Listed under: [Arduino Programmer Projects](#), [Projects](#), [Tutorials](#)

426. [Arduino Alcohol Detector Circuit Board](#)

In this project, I am going to Interface an Alcohol Sensor with Arduino. Here I have designed an Arduino Shield PCB using EASYEDA online PCB simulator and designer. Arduino Alcohol Detector will detect the alcohol level in breath and by using some calculations in code…… Listed under: [Sensor – Transducer – Detector Projects](#)

427. [Arduino Temperature Sensor](#)

I previously worked on an enclosure for the Computer Club server rack, and I thought it would be a good idea to put together a standalone temperature sensor system. Preferably it would interface over the internet so that IRC bots and other programs could talk…… Listed under: [Temperature Measurement Projects](#)

428. [DIY Arduino Inclinometer using MPU6050](#)

The MPU6050 is an IC 3-axis accelerometer and a 3-axis gyroscope combined into one unit. It also houses a temperature sensor and a DCM to perform a complex task. The MPU6050 is commonly used in building Drone and other remote robots like a self-balancing robot……. Listed under: [Bluetooth Projects](#)

429. [Alexa, Put the Kettle On!](#)

Make a smart kettle for under £60 using Alexa and Arduino. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Logic Level Converter – Bi-Directional × 1 Tefal Temperature Control Kettle × 1 Software apps and online services Arduino IDE Amazon Alexa…… Listed under: [Internet – Ethernet – LAN Projects](#)
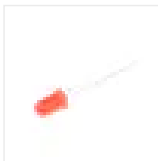
430. [Chicken Coop Automation](#)

Automating a chicken coop with sensors and actors, using an Arduino MKR1000 and the Blynk internet dashboard. Things used in this project Hardware components Arduino MKR1000 × 1 CHIHAI DC Motor – 12V 200rpm Encoder with Mounting Bracket × 1 Geekcreit L298N Dual H Bridge…… Listed under: [Home Automation Projects](#), [Projects](#)

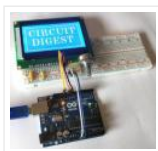431. [Automatic Pet Feeder using Arduino](#)

Today we are building an Arduino based Automatic Pet Feeder which can automatically serve food to your pet timely. It has a DS3231 RTC (Real Time Clock) Module, which used to set time and date on which your pet should be given food. So, by…… Listed under: [Clock – Timer Projects](#)

432. [Amazon DRS Promise: Never Miss Coffee Break Again!](#)

Amazon Dash Replenishment Service Automatic coffee ordering robot using Arduino MKR1000. Never miss another coffee break again! Things used in this project Hardware components Ultrasonic Distance Sensor × 1 LED (generic) × 1 SparkFun Pushbutton switch 12mm × 1 Resistor 100 ohm × 1 Arduino…… Listed under: [Projects](#), [Robotics – Automation Projects](#)

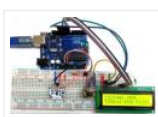433. [Interfacing Graphical LCD (ST7920) with Arduino](#)

There are many types of LCDs used in Electronic Projects. We have already used 16X2 LCD in many of our projects and also used TFT LCD with Arduino. You can find our entire 16X2 LCD related project by following this link, including interfacing with 8051, AVR, Arduino and many…… Listed under: [LCD Projects](#)

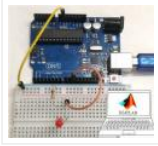434. [Good Sleep – Your Sleep Assistant](#)

Get the best night's sleep by using Alexa and Arduino to monitor the conditions in your bedroom, make suggestions and help you sleep better. Things used in this project Hardware components Arduino MKR1000 × 1 Amazon Alexa Amazon Echo × 1 SparkFun MEMS Microphone Breakout…… Listed under: [Sensor – Transducer – Detector Projects](#), [Wifi – WLan Projects](#)

435. [TVOC and CO2 Measurement using Arduino and CCS811 Air Quality Sensor](#)
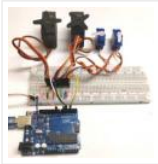
Sadly, in the name of progress, we have polluted the air, water, soil and the food we eat". So monitoring the air quality is very crucial now days because of pollution. For designing an air quality monitoring system we need durable and reliable air quality…… Listed under: [Sensor – Transducer – Detector Projects](#)

436. [Interfacing Arduino with MATLAB – Blinking LED](#)

In this project, we are going to learn, How to set up hardware support for Arduino in MATLAB software. How to control an Arduino using MATLAB code. We normally use Arduino IDE to write and upload codes to Arduino. The advantage of MATLAB is, it…… Listed under: [LED Projects](#)

437. [Controlling Multiple Servo Motors with Arduino](#)

Using one or two Servo with Arduino is Easy but what if we want to use more than one Servo Motors? Here, we are going to show you that how to control Multiple Servo Motors with Arduino. Connecting multiple Servo Motors with Arduino seems to…… Listed under: [Motor Projects](#)

438. [Smiling Snowball](#)

A web-controlled smiling snowball based on the Arduino MKR1000 controlled via WiFi using MQTT, Shitr.io and Node-red. Things used in this project Hardware components Arduino MKR1000 × 1 LED matrix 8 x 8 (MAX7219) × 6 Jumper wires (generic) × 1 cardboard 40 cm x…… Listed under: [Game – Entertainment Projects](#), [Projects](#), [Wifi – WLan Projects](#)

439. [Arduino Uno Rev3](#)

Arduino Uno is a microcontroller board based on the ATmega328P (datasheet). It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz quartz crystal, a USB connection, a power jack, an ICSP header and…… Listed under: [Battery Projects](#)

440. [Arduino with ESP8266 – Reading Data from Internet](#)

The ESP8266-01 has been a great module to quench all our thirsts for IOT projects. Since its release, it has developed a strong community and evolved into an easy to use, cheap and powerful Wi-Fi module. Another open-source platform which is much more popular is…… Listed under: [Wifi – WLan Projects](#)

441. [Reef Controller](#)

A Reef / Saltwater Aquarium controller based on an Arduino Mrk1000 and controlled remotely by an Universal Windows Platform app. Things used in this project Hardware components Arduino MKR1000 × 1 Adafruit Perma-proto board full size × 1 Adafruit I2C logic level converter × 1…… Listed under: [LED Projects](#), [Projects](#), [Temperature Measurement Projects](#)

442. [Space Race Game using Arduino and Nokia 5110 Graphical Display](#)

Programming has always been fun and it just got a lot better with development platforms like Arduino. Almost every programmer out here would have tried to develop some kind of game using the language that they learning/practising. This helps them to tune their programming skills…… Listed under: [Game – Entertainment Projects](#)
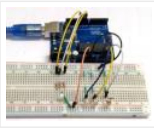
443. [Eggzact Science](#)

Entry for the "World's Largest Arduino Maker Challenge" – An IoT Project with Windows10, the Arduino MKR1000, and Chickens. Story Completed App – Home Page Completed App – Connection Page Completed App – Egg Overview Page Things used in this project Hardware components Arduino…… Listed under: [Internet – Ethernet – LAN Projects](#), [Other Projects](#), [Projects](#)

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444. [DIY Time Control Machine](#)

This project is about how to make a time machine! This machine looks like a glove, and can "stop" any moving subject. At first, watch a video with some demonstration and experiments, guess how it works, and then read about how to make it =)…… Listed under: [Clock – Timer Projects](#)

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445. [Arduino Color Mixing Lamp using RGB LED and LDR](#)

What if we can generate different colors using a single RGB led and make our room's corner more attractive? So, here is a simple Arduino based color mixing lamp which can change color when there is change in light in the room. So this lamp…… Listed under: [LED Projects](#)

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446. [ReSpeaker Home Automation](#)

ReSpeaker Home Automation Sample using Arduino MKR1000, Microsoft Cognitive Service Speech API, Api.ai and MQTT Things used in this project Hardware components Seeed ReSpeaker Mic Array v2.0 × 1 Arduino MKR1000 × 1 LED (generic) × 2 Jumper wires (generic) × 1 Software apps and…… Listed under: [Home Automation Projects](#), [Projects](#), [Sound – Audio Projects](#)

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447. [Voice Controlled LEDs using Arduino and Bluetooth](#)

Controlling LEDs with voice command seems to be a difficult task, but it's easy and you can quickly build it. We just need an Arduino UNO to serially communicate with HC-06 Bluetooth module and a smartphone to send voice command to Bluetooth module HC-06. For…… Listed under: [Bluetooth Projects](#)

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448. [Algorithmic Camera Trigger – Shutterino](#)

Camera trigger powered by Arduino MKR1000 and controlled by the app. Let the algorithm take the best shots. Things used in this project Hardware components Arduino MKR1000 Any board with WiFi and support for Firmata protocol will work × 1 Servos (Tower Pro MG996R) ×…… Listed under: [Phone Projects](#)

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449. [Arduino Plays Piano Tiles](#)

Ever wondered if your phone can play games by itself. Yes, it is possible. You can build a circuit to play Piano tiles on your smartphone. The video shows the demonstration of the project. Step 1: Components Required And the circuit can be built with…… Listed under: [Sensor – Transducer – Detector Projects](#)

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450. [Auto Intensity Control of Power LED using Arduino](#)

Be a bright spark, lights off till it's dark!" sometimes we forget to turn off the lights and waste electricity and you must have also seen street light turned on in the day. We have already built few circuits on Dark detector where lights turn…… Listed under: [LED Projects](#)

451. [Component Designing in Proteus ISIS](#)

Hello friends, hope you all are having fun in your life. Today's tutorial is about the component designing in Proteus ISIS. This tutorial actually deals with the presentation of your project. Usually when students give presentation of their projects, then it is asked that add...... Listed under: [Wireless Projects](#)
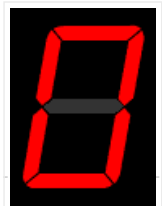
452. [Arduino RFID Door Lock](#)

You have seen RFID Door Lock Mechanism in some Hotels and other places, where you don't need a key to unlock the room. You are given a card and you just need to put it in front of a RFID Reader box, and the lock gets unlocked...... Listed under: [Security – Safety Projects](#)

453. [Temperature Controled Charcoal Smoker](#)

Use an Arduino MKR1000 to maintain a constant temperature in a charcoal smoker and allow monitoring over Wifi, Things used in this project Hardware components Arduino MKR1000 × 1 5V Brushless Blower × 1 MOSFET IRF520N Driver Module × 1 100K ohm NTC Thermistors ×...... Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

454. [Interfacing of Seven Segment with Arduino in Proteus](#)

Hello friends, today we are gonna have a look on how to interface Seven Segment with Arduino in Proteus. In my last post, I have posted an Arduino Library for Seven Segment Display, which is designed by our team and is quite basic in functionality....... Listed under: [LED Projects](#)

455. [Bluetooth Controlled 8×8 LED Matrix Sign Board Display using Arduino](#)
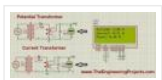

Be it the long stretched highways or your doctors front door, we have sign boards placed everywhere to provide us information. But these sign boards are often boring and cannot be configured as per our interest from time to time. So in this project we...... Listed under: [LED Projects](#)

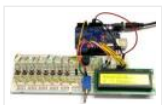456. [IoT Santa Tracker on Colorful World Map](#)

Use MKR1000 to show the Santa location in real-time on a colorful world map made of neopixels. Things used in this project Hardware components Arduino MKR1000 × 1 Raspberry Pi 3 Model B × 1 FR-1 Printed Circuit Board Blanks × 2 Translucent Colored Cast...... Listed under: [GPS Based Projects](#), [Projects](#)

457. [ADC value on LCD using Arduino](#)

Hello friends, hope you all are fine and having good life. In today's project, we will see how to display ADC value on LCD using Arduino in Proteus ISIS. Its quite a simple project in which we are gonna measure the voltage of ADC pins...... Listed under: [LCD Projects](#)

458. [Arduino Based Piano with Recording and Replay](#)

Arduino has been a boon for people who are not from the electronics background to build stuff easily. It has been a great prototyping tool or to try something cool, in this project we are going to build a small yet fun Piano using the......

Listed under: [Sound – Audio Projects](#)

459. [Wifi Enabled 2/4 Wheeled Robot Platform Utilizing MKR1000](#)

WIP- Using a MKR1000 to create a WiFi Enabled 2/4 Wheeled Robot Platform, Hardware is in hand, now to implement software Things used in this project Hardware components Arduino MKR1000 I was one of 1000 who won this × 1 SparkFun Dual H-Bridge motor drivers…… Listed under: [Projects](#), [Robotics – Automation Projects](#), [Wifi – WLan Projects](#)

460. [LM317 Voltage Regulator in Proteus](#)

Hello friends, hope you all are fine and having fun. In today's post we are gonna have a look at LM317 Voltage Regulator in Proteus. In the previous post, we have seen how to design a 5V Power Supply in Proteus ISIS, which I have designed…… Listed under: [Motor Projects](#)

461. [RGB LED Colour Control](#)

In this project, we will learn how to control the brightness and colour of an RGB LED via I/O ports with PWM output capability, and a touch display sliders. The 4Duino resistive touch display is used as a means for a graphical interface to control…… Listed under: [LED Projects](#)

462. [Publish Any Event to Wia Using Your MKR1000](#)

How to setup an MKR1000 and publish an event or location to Wia. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Wia Hand tools and fabrication machines Wia Platform Story Setup Your Environment Install the Arduino IDE…… Listed under: [Internet – Ethernet – LAN Projects](#), [Projects](#)

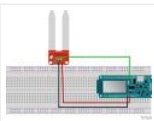463. [TIA Weak Artificial Intelligence IoT Assistant](#)

IoT security/environment monitoring device with NFC & fingerprint authentication devices and a Weak Artificial Intelligence Assistant.   Things used in this project Hardware components Arduino UNO & Genuino UNO × 2 Arduino MKR1000 × 1 Solderless Breadboard Half Size × 1 SeeedStudio Grove Base Shield…… Listed under: [Projects](#), [Security – Safety Projects](#), [Sensor – Transducer – Detector Projects](#)

464. [Getting Started with Wi-Fi](#)

In this project, we will learn how to get started with the ESP8266, an inbuilt 4Duino Wi-Fi module and connect to a local access point. The 4Duino display is used to print the status of the connection for debugging purposes. UNDERSTANDING THE SOFTWARE The ESP8266…… Listed under: [Wifi – WLan Projects](#)

465. [IoT System To Monitor Soil Moisture With Arduino](#)

This IoT system monitors the soil moisture using Arduino and sensors. Data are sent to an IoT cloud platform to access it anywhere. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Soil Moisture Sensor (with Screw Terminals) × 1 Software apps…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

466. [Time Stamp from Web Server](#)

INTRODUCTION In this project, we will learn the basics of Transmission Control Protocol (TCP) and how to communicate to a webserver over TCP. We will request and receive packets from the Google web server using the above communication protocol. The 4Duino display is used to…… Listed under: [Wireless Projects](#)

467. [Auto Leveling Laser Cross using Arduino](#)

So this Lazy Old Geek purchased a Laser Cross. I created a manual leveling Laser Cross to use for aligning stuff on my drill press: http://www.instructables.com/id/ManualLevelingLaserCross/ Well, being a Geek I decided to make an automated platform that adjusts automatically with an Arduino. Well, the…… Listed under: [Projects](#), [Sensor – Transducer – Detector Projects](#)

468. [DC Motor Control using XBee & Arduino in Proteus](#)

Hello friends, I hope you all are doing great. In today's tutorial, we are gonna design a project named DC Motor Control using XBee & Arduino in Proteus ISIS. I have shared the complete code and have also explained it in detail. You can also…… Listed under: [Motor Projects](#)

469. [Multiple mode Environmental Sensor Deck with MKR1000](#)

Many fun environmental sensors need a hardware interrupt. With the MKR1000, you no longer need to choose! You get I2C, analog ins too! Things used in this project Hardware components Arduino MKR1000 × 1 MOD-1016 Lightning Sensor × 1 DFRobot MQ-9 Gas Sensor × 1…… Listed under: [Sensor – Transducer – Detector Projects](#), [Temperature Measurement Projects](#)

470. [Start Connect ARTIK Cloud with Arduino/Genuino MKR1000](#)

Using Arduino/ Genuino MKR1000 to connect ARTIK Cloud control I/O light LED. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Samsung ARTIK Cloud for IoT Story https://www.arduino.cc/en/Main/ArduinoMKR1000 A simple project let mkr1000 connect to artik cloud, but…… Listed under: [LED Projects](#), [Wifi – WLan Projects](#)

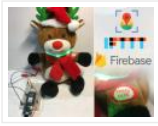471. [Controlling Patient's Fever with Artik & Arduino](#)

This project consists of 2 devices. the first one is wearable and monitors temperature, second one will control the temperature. Things used in this project Hardware components Arduino MKR1000 × 2 SparkFun Logic Level Converter – Bi-Directional × 1 Li-Ion Battery 1000mAh × 1 RGB…… Listed under: [Medical – Health based Projects](#), [Projects](#), [Tutorials](#)

472. [HID Attack Over WiFi Using Arduino MKR1000](#)

Arduino MKR1000 as a HID, for performing HID penetration testing over WiFi networks. Things used in this project Hardware components Arduino MKR1000 × 1 Story Arduino MKR1000 Today I have an Arduino MKR1000 which is a board with built-in wifi chipset specially designed for IOT…… Listed under: [Arduino Programmer Projects](#), [Wifi – WLan Projects](#)

473. [Dash Button Santa with Arduino MKR1000](#)

Send information to Santa Claus about the status of the gift request. Things used in this project Hardware components Arduino MKR1000 × 1 SparkFun Pushbutton switch 12mm × 1 Jumper wires (generic) × 1 Resistor 10k ohm × 1 NeoPixel strip × 1 Software apps…… Listed under: [GPS Based Projects](), [Internet – Ethernet – LAN Projects]()

474. [Add SSL Certificates To MKR1000]()

Cannot connect to your favourite https site with your MKR1000? Follow this guide to install SSL certificate in a easy way using the GUI. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Arduino IDE Arduino Firmware updater…… Listed under: [Arduino Programmer Projects]()

475. [Water Quality Monitoring Using MKR1000 and ARTIK Cloud]()

Water quality data monitoring for swimming pools, fish aquarium and more! Things used in this project Hardware components Arduino MKR1000 × 1 Jumper wires (generic) × 1 DFRobot pH Meter × 1 Resistor 4.75k ohm × 1 Temperature probe × 1 Software apps and online…… Listed under: [Temperature Measurement Projects]()

476. [Weather Dashboard with MKR1000 and Losant]()

This project is about building a simple weather dashboard using MKR1000 and Losant platform. Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 1 Software apps and online services Arduino IDE Losant Platform Story Introduction…… Listed under: [Sensor – Transducer – Detector Projects](), [Wifi – WLan Projects]()

477. [IoT Smart Socket Arduino And Cayenne]()

A really smart IoT socket. Switch ON/OFF your device by the smartphone using Cayenne Dashboard and Arduino MKR1000. Things used in this project Hardware components Arduino MKR1000 × 1 RobotGeek Relay × 1 9V 1A Switching Wall Power Supply × 1 Software apps and online…… Listed under: [Projects](), [Tutorials]()

478. [Using Python and Arduino MKR1000 for Secure IoT]()

Getting started with Python and Arduino MKR1000 for secure IoT projects. Things used in this project Hardware components Arduino MKR1000 × 1 Software apps and online services Zerynth Studio Story Arduino MKR1000 meets Python With the last release, Zerynth officially supports Arduino MKR1000, a device specifically designed…… Listed under: [Development Board – Kits Projects]()

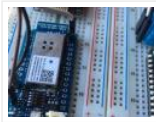479. [Home Automation with Arduino MKR1000 and Windows 10]()

Home Automation through Wi-Fi connectivity (Arduino MKR1000) and Windows 10. Things used in this project Hardware components Arduino MKR1000 × 1 Relay (generic) Input: 3V × 1 General Purpose Transistor NPN × 1 1N4007 – High Voltage, High Current Rated Diode × 1 Resistor 10k…… Listed under: [Home Automation Projects]()

480. [Intelligent Buggy featuring 4Duino-24]()

4Duino Intelligent Buggy project demonstrate how does uCAM-II works. This project also utilized two 4duino communicating using Server-Client architecture over TCP. It also uses a buggy car which carry the 4duino server and uCAM-II. By using built-in ESP8266, 4duino client sends a request to 4duino…… Listed under: [Wireless Projects]()

481. [Send MKR1000 Data to Google Sheets](#)

This project allows you to transmit DHT environmental data from your MKR1000 to your own customizable Google Sheet for data logging. Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 1 Jumper wires (generic) ×...... Listed under: [Other Projects](#)

482. [Pet Food Dispenser featuring 4Duino-24](#)

In this project, we will use a 4Duino and several IR sensors to create a simple pet food dispenser. 4Duino checks whether a food tray contains enough food or not. It is programmed to read IR values from each sensor. These values change depending on the...... Listed under: [Sensor – Transducer – Detector Projects](#)

483. [MKR1000 to Initial State DHT Visulaizations](#)

This demonstrates how to use your Arduino MKR1000 to connect to InitialState.com to produce colorful visualizations of your sensor data. Things used in this project Hardware components Arduino MKR1000 × 1 DHT11 Temperature & Humidity Sensor (4 pins) × 1 Breadboard (generic) × 1 Jumper...... Listed under: [Interfacing(USB – RS232 – I2c -ISP) Projects](#), [Sensor – Transducer – Detector Projects](#)

484. [Assistance for Visually Impaired featuring 4Duino-24](#)

Blind Assistance is a project designed to help visually impaired people detecting obstacles in their way. It uses 4Duino, three ultrasonic sensors, one vibration motor and an LED. These components are attached to a walking stick. Blind Assistance alarms the user if there's an obstacle...... Listed under: [Wireless Projects](#)

485. [MKR1000 Surprise Room Decoration](#)

This project is dedicated to my parents, but you can also use it for surprise events for someone special. Things used in this project Hardware components Arduino MKR1000 × 1 5V 4 Channel Relay Module × 1 Male/Female Jumper Wires × 12 Software apps and...... Listed under: [LED Projects](#), [Other Projects](#)

486. [MKR1000 Servo Control Panel](#)

A servo controller using the built-in WiFi abilities of the Arduino MKR1k. The panel consists of a MKR1k web listener and Javascript/ajax. Things used in this project Hardware components Arduino MKR1000 Servos (Tower Pro MG996R) Breadboard (generic) Software apps and online services Arduino IDE Story...... Listed under: [Arduino Programmer Projects](#), [Development Board – Kits Projects](#), [Projects](#)

487. [Voting Machine featuring 4Duino-24](#)

The 4Duino Polling Machine is an inquiry project that involves two or more people and has implemented the ability to send and receive data on both ends. The Polling Machine Project works by sending and receiving Questions and Answers (from the Choices) in the form...... Listed under: [Security – Safety Projects](#)
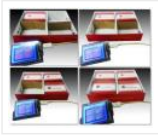
488. [MKR1000 Universal Remonster!](#)

WiFi connected universal remote with smart phone webapp. Things used in this project Hardware components Arduino MKR1000 Arduino Nano R3 General Purpose Transistor NPN Triggers the PNP transistors of IR LED array

Resistor 1k ohm pulls down NPN transistor IR transmitter (generic) IR LEDs. Get...... Listed under: [LED Projects](#), [Wifi – WLan Projects](#), [Wireless Projects](#)

489. [Stock Monitoring featuring 4Duino-24](#)

In this project, we will use several IR sensors to check if an item from an inventory box is present or not. This project makes use of a 4Duino-24 to check whether an item is present or missing from the inventory. The 4Duino uses its...... Listed under: [Sensor – Transducer – Detector Projects](#)

490. [MKR1000 WiFi Robot](#)

This project consists of a small robot controlled via WiFi using an Arduino MKR1000, MKR2UNO Shield Adapter and Arduino Motor Shield! Things used in this project Hardware components Arduino MKR1000 × 1 Arduino MKR2UNO Adapter × 1 Arduino MotorShield Rev3 × 1 Arduino Small DC...... Listed under: [Battery Projects](#), [Robotics – Automation Project Ideas](#)

491. [Temperature and Humidity monitoring with DHT22 sensor Arduino Uno R3](#)

The objective of this tutorial is to learn how to use the DHT22 sensor with Arduino uno. The room temperature and humidity will be printed to serial monitor and also will be displayed to the LCD 4×20 in Proteus ISIS. [caption id="attachment_28379" align="aligncenter" width="300"] DHT22...... Listed under: [Temperature Measurement Projects](#)

492. [Smart Phone Controlled Digital Code Lock using Arduino](#)

There are many types of security systems used all over the world and Digital Code Lock is one of them. We have already covered many digital locks with simple 16×2 LCD using Arduino, Raspberry Pi, 8051 etc. Here we are going to build a Smart Phone...... Listed under: [Security – Safety Projects](#)

493. [Create a Private Chat Room using Arduino, nRF24L01 and Processing](#)

Creating a Local Network to share personnel and confidential data's has become almost impossible for a common man in our modern world. This is mainly because all common chat methods like Whatsapp, Facebook, Hangout and almost everything involves an internet connection. What if, we could...... Listed under: [Wireless Projects](#)

494. [Smart Phone Controlled FM Radio using Arduino and Processing](#)
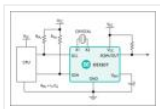
In this project we will use an existing FM radio which went repair a long time ago, to convert it into a Smart Wireless FM Radio controlled using Phone, with the help of Arduino and Processing. We can convert any manually operated electronic device into...... Listed under: [Wireless Projects](#)

495. [Door Alarm using Arduino and Ultrasonic Sensor](#)

Security has always been a major concern for all of us and there are many Hi tech and IoT based security and surveillance system are available in the market. Intruder or Burglar Alarm is one of the classic and popular project among the Electronics students...... Listed under: [Security – Safety Projects](#)

496. [Real Time Home Automation Using Arduino Uno R3 and DS1307 RTC (Part-1)](#)

Hello every one , welcome back . In this new arduino tutorial series I'm gonna show you how to control every thing in your home on time basis . After doing this project you will be able to control your home appiliences like TV ,…… Listed under: [Home Automation Projects](#)

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497. [0-24v 3A Variable Power Supply using LM338](#)

Batteries are generally used to power up the Electronic Circuit and Projects, as they are easily available and can be connected easily. But they drained off quickly and then we need new batteries, also these batteries cannot provide high current to drive a powerful motor……. Listed under: [Motor Projects](#)

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498. [Connecting multiple I2C device on Arduino Uno R3](#)

Hello every one ! welcome back ! It's nice to show you my new tutorial after long time .Today we will learn how to connect multiple I2C device (typically for demo temperature sensor) to the Arduino Uno .I recommend download datasheet of that I2C…… Listed under: [Arduino Programmer Projects](#)

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499. [DIY Speedometer using Arduino and Processing Android App](#)

In this project we make a Cool Speedometer for bikes or any automotives by using Arduino which broadcast the speed using Bluetooth to an Android application that we created using Processing. The complete project is powered by an 18650 Lithium cell and hence highly portable along with your vehicle……. Listed under: [Bluetooth Projects](#)

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500. [Virtual Reality using Arduino and Processing](#)

This is a very interesting project in which we are going to learn how to implement virtual reality using Arduino and Processing. For most of us, the movie Iron man by Jon Favreau has always been an inspiration to build new things that will make…… Listed under: [Wireless Projects](#)

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501. [Simple Arduino Audio Player and Amplifier with LM386](#)

Adding sounds or music to our project will always make it looks cool and sounds much more attractive. Especially if you are using an Arduino and you have lots of pins free, you can easily add sound effects to your project by just investing in…… Listed under: [Sound – Audio Projects](#)

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502. [How to Send Data to Web Server using Arduino and SIM900A GPRS/GSM Module](#)

Today we are here with an interesting project in which we will Send Data to the SparkFun server using Arduino and GPRS. This is an IoT based project in which we will use GPRS, present on the GSM Module SIM900A board, to send some data to…… Listed under: [Wireless Projects](#)

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503. [Smart Knock Detecting Door Lock using Arduino](#)

Security is a major concern in our day to day life, and digital locks have become an important part of these security systems. There are many types of security systems available to secure our place. Some examples are PIR based Security System, RFID based Security…… Listed under: [Security – Safety Projects](#)

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504. [Fingerprint Based Biometric Voting Machine using Arduino](#)

We all are quite familiar with Electronic Voting Machines, where your vote gets registered electronically and you don't need to use ballot paper to vote in election. Today security is a major concern and it also needs to be ensured that someone can't vote twice,...... Listed under: [Sensor – Transducer – Detector Projects](#)

505. [Arduino based Angry Bird Game Controller using Flex Sensor and Potentiometer](#)

It's all started with a small game from the dark ages called "Mario", right from the time of being a tiny little guy jumping on ducks to save my princess till being a masculine handsome Prince roaming in Persia (Prince of Persia) fighting against darkness...... Listed under: [Game – Entertainment Project Ideas](#), [Game – Entertainment Projects](#)

506. [Arduino Motion Detector using PIR Sensor](#)

Detecting motions or movements has always been important in most projects. With the help of the PIR Sensor it has become very easy to detect human/animal movements. In this project we will learn how we can interface a PIR Sensor with a microcontroller like Arduino....... Listed under: [Sensor – Transducer – Detector Projects](#)

507. [DC-DC Buck Converter Circuit – How to Step Down DC Voltage](#)

In this project we are going to make a Buck Converter Circuit using Arduino and N-Channel MOSFET with a maximum current capacity of 6 amps. We are going to step down 12v DC to any value between 0 and 10v DC. We can control the...... Listed under: [Motor Projects](#)

508. [Arduino Based Digital Ammeter](#)

Ammeter is used to measure current flow through any load or device. Here in this Arduino Ammeter, we will explain about measuring of current by using ohm's law. It will be quite interesting as well as a good application of basic science that we studied...... Listed under: [Sensor – Transducer – Detector Projects](#)

509. [Arduino DC Motor Speed and Direction Control using Relays and MOSFET](#)

In this project we control direction and speed of a 24v high current motor using Arduino and two relays. No power switches are needed for this circuit, just two push buttons and in Potentiometer to control the direction and speed of DC Motor. One push button...... Listed under: [Motor Projects](#)

510. [Automatic AC Temperature Controller using Arduino, DHT11 and IR Blaster](#)

An AC (Air Conditioner) which was once considered to be a luxury item and was only to be found in big hotels, movie halls, restaurants etc... But, now almost everyone has a AC in our home to beat out the summer/winter and those who have...... Listed under: [Temperature Measurement Projects](#)

511. [Interfacing Hall Effect Sensor with Arduino](#)

Sensors have always been a vital component in any Project. These are the ones which convert the real real-time environmental data into digital/variable data so that it can be processed by electronics. There are many different types of sensors available in the market and you...... Listed under: [Sensor – Transducer – Detector Projects](#)

512. [Cell Phone Controlled AC using Arduino and Bluetooth](#)

In today's modern world, where ever we go we have lots of electronic devices around us. But, out of all, there is only one device that we personally have in our pockets all the time. Yes, it is our mobile phones. Now Mobile phones have...... Listed under: [Phone Projects](#)

513. [AnduinoWiFi Getting Started](#)

Consider this the "Blinky LED" of the anduinoWiFi shield! Things used in this project Hardware components Andium Anduino WiFi × 1 Arduino Due × 1 Arduino Zero & Genuino Zero × 1 Software apps and online services Arduino IDE Story Motivation Implementing an IoT prototype...... Listed under: [Projects](#), [Wifi – WLan Projects](#)

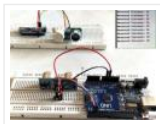514. [Connecting Anduino to IFTTT](#)

Connect your anduinoWiFi to IFTTT. Control everything around you, or 'let go' and let random events in cyberspace control your surroundings!   Things used in this project Hardware components Arduino Due × 1 Arduino Zero & Genuino Zero × 1 Andium Anduino WiFi × 1...... Listed under: [How To – DIY – Projects](#), [Wifi – WLan Projects](#)

515. [how to measure home ac current 110v / 200v with arduino](#)

The cool thing about an ACS712 is that current is measured is measured in two directions. What this means is that if we sample fast enough and long enough, we sure to find the peak in one direction and the peak in another direction. With...... Listed under: [Metering – Instrument Projects](#)

516. [How To Measure Distance Between Two Ultrasonic Sensors](#)

Ultrasonic sensor (HC-SR04) is commonly used to find the distance of an object from one particular point. It has been fairly easy to do this with the Arduino and the code is also pretty simple. But in this article we are going to try something...... Listed under: [Calculator Projects](#), [Metering – Instrument Projects](#)

517. [Arduino Based Fire Fighting Robot](#)

According to National Crime Records Bureau (NCRB), it is estimated that more than 1.2 lakh deaths have been caused because of fire accidents in India from 2010-2014. Even though there are a lot of precautions taken for Fire accidents, these natural/man-made disasters do occur now and...... Listed under: [Robotics – Automation Projects](#)

518. [Temperature Controlled AC Home Appliances using Arduino and Thermistor](#)

Suppose you are sitting in a room and feeling cold and you want your heater to be automatically turned on, and then off after some time when room temperature is increased, then this project help you to control your home appliances automatically according to the...... Listed under: [Battery Projects](#), [LCD Projects](#)

519. [Arduino Relay Control Tutorial](#)

LED Blinking is a very common and almost first program for every embedded learner or beginner. In which we blink an LED with having some delay. So today we are here with the same project but here we will use an AC bulb instead of...... Listed under: [Arduino Programmer Projects](#), [Featured](#), [LED Projects](#)

520. [Measure Sound/Noise Level in dB with Microphone and Arduino](#)

Noise pollution has really started to gain importance due to high population density. A normal human ear could hear sound levels from 0dB to 140dB in which sound levels from 120dB to 140dB are considered to be noise. Loudness or sound levels are commonly measured...... Listed under: [Arduino Programmer Projects](#), [Phone Projects](#)

521. [Arduino Metal Detector](#)

Metal Detector is a security device which is used for detecting metals which can be harmful, at various places like Airports, shopping malls, cinemas etc. Previously we have made a very simple Metal detector without a microcontroller, now we are building the Metal Detector using...... Listed under: [Arduino Programmer Projects](#), [Battery Projects](#)

522. [Smart Blind Stick using Arduino](#)

Ever heard of Hugh Herr? He is a famous American rock climber who has shattered the limitations of his disabilities; he is a strong believer that technology could help disabled persons to live a normal life. In one of his TED talk Herr said "Humans...... Listed under: [Arduino Programmer Projects](#), [LCD Projects](#)

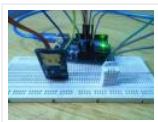523. [Arduino Calculator using 4×4 Keypad](#)

Programming is always fun and Arduino is a wonderful platform if you are just getting started with Embedded programming. In this tutorial we will build our own calculator with Arduino. The values can be sent in through a keypad (4×4 keypad) and result can be...... Listed under: [Battery Projects](#), [Blog](#), [Calculator Projects](#), [LCD Projects](#)

524. [Measuring PPM from MQ Gas Sensors using Arduino (MQ-137 Ammonia)](#)

Right from the time of industrial age, we mankind have been rapidly developing. With every progress we also pollute our environment and eventually degrading it. Now global warming is an alarming threat and even the air that we breathe are getting critical. So air quality...... Listed under: [Other Projects](#)

525. [Temperature and Humidity Data Logger using Arduino](#)

In this project, we are going to make a temperature and relative humidity data logger. Arduino is the brain of this project. DHT22 sensor is used for sensing temperature and relative humidity. Arduino Uno is programmed to read temperature, humidity values from DHT22 sensor and...... Listed under: [Calculator Projects](#)

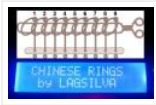526. [Digital Thermometer using Arduino and DS18B20 Sensor](#)

In this project, we are going to make a Digital Thermometer using Arduino Uno. We will use DS18B20 temperature sensor to sense the temperature and Nokia 5110 LCD to display it. DS18B20 is a 1-Wire digital temperature sensor manufactured by Maxim Integrated and is capable...... Listed under: [Calculator Projects](#), [LCD Projects](#)

527. [Laura: Emotional Compass Lamp](#)

Story Laura Laura is a "counseling" lamp who is helping me to find myself and to understand where I want to go. For her great help, I wanted to give her a present that represents the work we are doing. The inspiration came from the...... Listed under: [Home Automation Projects](#)

528. [Chinese Rings Puzzle With Arduino](#)

Introduction Hello all, The Chinese Rings Puzzle with Arduino is my version of a centennial Chinese puzzle. It is very simple to play and it is an example of a combinatorial puzzle, and lots of patience and concentration is required to solve it. The objective…… Listed under: [Game – Entertainment Projects](#)

529. [ATtiny85 EMF Detector](#)

Story This is a simple tutorial to create an EMF detector. You can use Arduino for this job, but is better use a microcontroller called Attiny85. It is possible program it throe the Arduino interface. What is a Magnetic Field [from Wikipedia] An electromagnetic field…… Listed under: [Sensor – Transducer – Detector Projects](#)

530. [IoT Pet Feeder: Use circuito.io to build a smart food dispenser for your pet](#)

Story This IoT pet feeder is our first IoT project with circuito.io! We are happy to share it with our community to demonstrate how simple it can be to make basic IoT projects with circuito.io. We are also excited to share this project with you…… Listed under: [Home Automation Projects](#)

531. [Make your own gesture-controlled Wizard's Walking Staff](#)

Story This project uses the Arduino 101, a battery and an LED strip to make a gesture-controlled Wizard's Walking Staff. We'll define three different light-display "spells" you can summon by moving the staff in one of three gestures. Tech: The code uses the Inertial Measurement…… Listed under: [Other Projects](#)

532. [MorseCard – A Tiny Telegraph Station](#)

Story Behold: the MorseCard! Fulfill your dreams of becoming a telegraph operator (or just make something cool to show your friends) with this weekend project. The MorseCard features a high-contrast OLED screen that will decipher whatever you tap out. I have written a variety of…… Listed under: [Other Projects](#)

533. [Starry Night Prom: How did I stand out at prom? In a light up dress of course!](#)

About So for my Junior prom, I really wanted a dress I had seen online that was blue with a sequin ombre, but it was out of my price range, and way too voluminous. My mom and I had made my Homecoming dress the year…… Listed under: [Other Projects](#)

534. [DIY Voltmeter with Arduino and a Nokia 5110 Display](#)

Story In this tutorial I am going to show you how to build a Voltmeter with a big Nokia 5110 LCD display using Arduino. Building a voltmeter is a great learning experience. When you finish building this project, you will have a better understanding of…… Listed under: [Metering – Instrument Projects](#)

535. [Plant Monitoring System using AWS IoT](#)

Story Picture this you are going on a vacation for a week or so and are worried about your house plant at home.Here is a great project to under take a week before you head out for your vacation. Build yourself a plant monitoring and notification system…… Listed under: [Home Automation Projects](#)

536. LedMatrix Tweet Visualization

Story Description Display tweets with a certain hashtag on a led-matrix using an Arduino/Genuino Yùn or Yùn-Shield. We will use a Python script to log into twitter and check for updates. Configuring the Yun101/YunShield In order to connect your board to internet you first have...... Listed under: Other Projects

537. Purdue ExoMIND Glove

Description The ExoMind Glove is a wearable device equipped with 7 accelerometers that are used to quantify forearm, wrist, and finger angles. Additionally, an EMG with conductive fabric electrodes is secured into the sleeve of the device to monitor muscle activity. The glove houses an...... Listed under: Medical – Health based Projects

538. Integrating Wiscore Alexa EVK and Arduino via Serial Port

Story Wiscore: Integrating Arduino with Alexa As part of the series of tutorials for the Wiscore Alexa AVS EVK, we will see how to integrate Arduino boards (Uno, Leonardo, Due etc) directly with Alexa Voice Service. The Wiscore board provides the means to communicate with...... Listed under: Other Projects

539. Arduino101 / tinyTILE BLE: Match-Making Sunglasses

Story Instead of using an app, what if you could send a signal to eye-contact someone you are interested in talking to, in a social setting, even from afar? I'm not proposing a different way to start a date. I'm exploring a new usage of...... Listed under: Game – Entertainment Projects

540. Paint Your Dimmer Switch on the Wall

Motivation What to do you do when you have some Bare Conductive paint and some Philips Hue lightbulbs laying around? You paint a dimmer switch on your wall using conductive paint! Getting Started Some things you'll need to get started: Arduino Due (or Zero) AnduinoWiFi...... Listed under: Home Automation Projects

541. Using Nokia 3310 84×48 LCD with Arduino

Story The Nokia 5110 is a basic graphic LCD screen for lots of applications. It was originally intended to be used as a cell phone screen. This one is mounted on an easy to solder PCB. It uses the PCD8544 controller, which is the same...... Listed under: Phone Projects
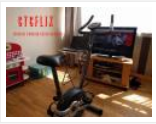
542. Fidget Spinner RPM Counter

Hi everyone! This is my next project, Fidget Spinner RPM Counter or Arduino Tachometer with Hall-Effect Sensor. 1: Requirements Parts Required: Fidget Spinner neodyimium magnet Arduino Uno LED + resistor 220 Ohm Hall-Effect Sensor – a3144 resistor 10 k Wires Breadboard LCD 1602 2: Hall-Effect...... Listed under: Sensor – Transducer – Detector Projects

543. An Urban Plant Watering Solution

This device improves plant irrigation in urban environments. Powered by an Arduino 101, it uses on-board tools along with a few external sensors to calculate optimum conditions for watering plants in its own environment, and then waters the plant itself at the calculated time. It...... Listed under: Home Automation Projects

544. [Cycflix: Exercise Powered Entertainment](#)

Now that the cheesy title has pulled you (Fitflix was taken and I didn't want to be sued) I'll tell you about the project, it uses a stationary exercise bike connected to an Arduino Nano to control the streaming of Netflix on a PC, I...... Listed under: [Game – Entertainment Projects](#)

545. [Controlling Robot Over Bluetooth Using Xbox Steering Wheel](#)

So I'm guessing that I'm like a large amount of people on this site that are low key hoarders, keeping anything they could turn into a project or salvage for parts and this is an example of that. I have this old Mad Catz Steering...... Listed under: [Robotics – Automation Projects](#)

546. [Can I Use an Arduino Uno for This?](#)

So back when I first started working with micro controllers, Arduinos mainly the most annoying this ever was when i would follow someones tutorial for a project and they would use the Arduino uno, I would be using the Arduino micro or something, i would...... Listed under: [Other Projects](#)

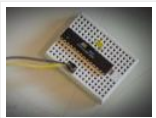547. [Distance Measurement Vehicle via Websocket](#)

Story When you measure distance between two point general way is to use a ruler. But you can use a lot of other ways: by laser, map, foot or walking meter. The walking meter is very useful when you are measuring curved (not straight) distance....... Listed under: [Metering – Instrument Projects](#)

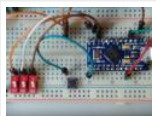548. [Reducing Arduino Power Consumption](#)

Story When it comes to portable electronics, one of the most important features is how to maximize the battery life. The ATmega328P, used on popular boards like the SparkFun RedBoard, Arduino Uno, and Pro Mini are actually quite power hungry. The RedBoard and Arduino Uno,...... Listed under: [Other Projects](#)

549. [Arduino on Internal Oscillator Crystal as Clock Source](#)

Story I have been working out ways to make a minimal Arduino to fit in the smallest space possible, and limit the power consumption of the microcontroller. (You can go through this project for more info about reducing power consumption at: Reducing Arduino Power Consumption)....... Listed under: [Clock – Timer Projects](#)

550. [RPi Serial Console Automation Using Arduino](#)

Story A Continuation of One Button Restart of a Stalled Raspberry Pi In a recent article, I showed how an Arduino Pro Micro can be utilized to send characters to the serial console of the Raspberry Pi Zero W. The Pro Micro was chosen because...... Listed under: [Other Projects](#)

551. [Darby's not dead](#)

Story In the future there is a bar where all the dead punk rockers hang out. They are each given a MiFare classic card programmed with their name and 666 credits. This is the device the bartender uses to keep track of their tab. This...... Listed under: [Internet – Ethernet – LAN Projects](#)

552. [2 Players Competition/Quiz Buzzer Box System Using Arduino](#)

Story A bit of background. My brother came to me with an odd box that a friend of his asked someone to make so that they can determine the fastest contestant to push a button. The box consisted of some LEDs, two buttons, and two...... Listed under: [LED Projects](#)

553. [Congnitive GSM Autonomous Water Meter](#)

Story Imagine you could administer remotely your water utility service in real time, turning on or off your water services according to your usage patterns or needs, and not just letting the water flow in all the time, you could prevent taps for leaking a...... Listed under: [Metering – Instrument Projects](#)

554. [Back-Saver: Backpack-carrying follower robot powered by Wunderbar](#)

Hardware components: SparkFun RedBoard × 1 DC Stepper Motor 28-BY-J-48 × 1 MB 1010 LV-Max-Sonar EZ1 × 1 WunderBar × 1 Story A Sparkfun Red-Board utilizes a LV-Max Sonar component to judge distances between the user and the robot, powering the DC stepper motor to...... Listed under: [Robotics – Automation Projects](#)

555. [How to use the TFT display 2.2″ QVGA with Arduino](#)

Story The main purpose of this project is to build a system based on chip ATMEGA328P, Arduino compatible, and interface it with a 2.2" QVGA TFT display using the library ILI9341. As an alternative to the self-build system you can use an Arduino Pro 3.3...... Listed under: [Other Projects](#)

556. [Easy Serial on the ATtiny](#)

Introduction The Atmel tinyAVR MCU's are great little chips for projects but can prove difficult to debug. Some ATtiny chips do not have direct support for hardware based serial and therefore the Serial object is unavailable in your code, however, it is easy to add...... Listed under: [Other Projects](#)

557. [CyDuino : An Arduino Dev Board with Lots of Goodies](#)

Story We (most of us) really like Arduino because it's possible to make cheap clones, lots of libraries, examples, forum support and community out there. Outside Arduino world, I like Cypress PSoC for some of its cool features like Graphical IDE, APIs, great features and...... Listed under: [Sensor – Transducer – Detector Projects](#)

558. [Trinket Firmware Exorcism](#)

Story Warning: Digispark uses Attiny85 PIN#1 as I/O – remove RESET button functionality Notes FOR ADVANCED USERS ONLY The Trinket 5V and the Digispark share the same hardware design, right down to the LED being on PB1. Personally, I prefer the Trinket hardware over the Digispark,...... Listed under: [Other Projects](#)

559. [A Semaphore for your Office Desk](#)

Story This is a small semaphore you can put on your desk. You can use it to tell whatever you want to the people around it. For example, because you need some concentration and you'd like your colleagues not to disturb you. Or to tell...... Listed under: [Other Projects](#)

560. [Chachka (Trinket clone)](#)

Chachka is born! Chachka is an Adafruit Trinket CLONE built from the ATtiny85 microcontroller. Because it is a current Adafruit product, it has a training guide and its own support forum and lots of sample code. All of this means that like an Uno clone, the...... Listed under: [LED Projects](#)

561. [Waterproof 10 Minute Timer](#)

Story I went for a shower one day, was getting late for office. Running tight on time, but I didn't want to come out of hot shower in cold morning. Without any clock in my bathroom I was saying to myself "Lets enjoy the shower...... Listed under: [Clock – Timer Projects](#)

562. [Build the Internet for your friend](#)

Background A few years ago, a co-worker turned me on to this TV program called "The IT Crowd". The show revolves around a two-person IT team and their "Relationship Manager", Jen, who inadvertently landed the job by including some basic PC skills on her resume....... Listed under: [Internet – Ethernet – LAN Projects](#)

563. [Arduino : Lead Acid Battery Capacity Tester (Updated)](#)

Story Yosh ! At last, finished working on this project. I have been working on this project for a while, then got bored and left the remaining work (mostly firmware) for a couple of months, ah ! the longest project I ever did...... Listed under: [LED Projects](#)

564. [ATTiny Joule Thief NeoPixel](#)

Introduction I've been fascinated with joule thief circuits since I made my first one. It's amazing what all you can power from a single AA or AAA battery. The only problem is you can't do much beyond light up an LED because the current isn't...... Listed under: [LED Projects](#)

565. [PicoDuino = Digispak + RGB LED + Button + Relay Driver](#)

Hardware components: Atmel ATTiny85 × 1 DigiSpark × 1 Software apps and online services: Arduino IDE   STORY StartFragment How to get FREE board Order 1pc Picoduino board Create project max. 30 days from order Write project steps on instructables ... Include link to my...... Listed under: [Development Board – Kits Projects](#)

566. [IR Thermometer, Stopwatch, Cooking Timer, Inactivity Tracker](#)

Hardware components: Arduino UNO & Genuino UNO × 1 Adafruit MLX90614 × 1 Atmel AVR for Arduino 328P/168P/8A × 1 SparkFun 7-Segment Serial Display – Red 3 digit display used × 1 Breadboard (generic) 8×2 cm × 2 16 MHz Crystal × 1 Slide Switch...... Listed under: [Metering – Instrument Projects](#), [Temperature Measurement Project Ideas](#)

567. [DIY Programmable (SCPI) Bench Power Supply](#)

Hardware components: Arduino Due × 1 LTC3864 × 2 Texas Instruments TL783 × 2 Texas Instruments REF5025 × 2 Texas Instruments DAC8552 × 2 ADG465 × 2 Texas Instruments TS5A9411 × 2 Texas Instruments ADS1120 × 2 Texas Instruments Quad Comparator × 2

Texas Instruments...... Listed under: [Development Board – Kits Projects](#)

568. [Zoned Climate Control with MediaTek's LinkIt™ Smart 7688](#)

Hardware components: MediaTek Labs The MediaTek LinkIt™ Smart 7688 platform × 1 Everything ESP ESP8266 ESP-01 × 1 Arduino Nano R3 × 1 Atmel ATTiny85 × 1 DHT22 Temperature Sensor × 1 Servo (generic) × 1 Software apps and online services: Arduino IDE STORY Winter...... Listed under: [Temperature Measurement Projects](#)

569. [Infrared Dedicated Decoder](#)

Hardware components: Atmel ATTiny85 × 1 Attiny85 IR code for Sony protocol Attiny85 IR code for Sony protocol Download /* IR remote control (Sony) detection for Arduino, M. Burnette Binary sketch size: 2,794 bytes (of a 8,192 byte maximum) ☺ 20130103 MRB Modified for interface...... Listed under: [LED Projects](#)

570. [Attiny85/84 with Bluetooth](#)

Hardware components: Capacitor 10 μF × 1 Atmel ATTiny85 × 1 Arduino UNO & Genuino UNO × 1 LED (generic) × 1 Jumper wires (generic) × 1 HC-05 × 1 Software apps and online services: Arduino IDE MIT App Inventor 2   STORY Here I...... Listed under: [Phone Projects](#)

571. [IR Controller for Air Conditioner](#)

Hardware components: Atmel ATTiny85 × 1 Everything ESP ESP8266 ESP-01 × 1 Arduino Nano R3 × 1   STORY My goal is to make my window AC units more functional. Currently they use an on-board thermostat to turn on when the room gets above a...... Listed under: [Arduino Programmer Projects](#), [Home Automation Projects](#)

572. [Easily run your ATtiny at 16MHz, without an external clock, from the Arduino IDE](#)

Hardware components: Atmel ATTiny85 × 1 SparkFun Tiny AVR Programmer × 1 Software apps and online services: Arduino IDE   STORY Introduction The Atmel tinyAVR MCU's (ATtiny) are a series of chips optimized for applications requiring performance and/or power efficiency in a small package. These have internal...... Listed under: [Arduino Programmer Projects](#), [Clock – Timer Project Ideas](#)

573. [ATtiny85 for Simple Projects: Arduino Basics](#)

Bare bones: The ATtiny85 on its Own The ATtiny is a small, inexpensive chip that can replace the Arduino in a project you have prototyped. This helps make the project smaller and more permanent, as well as freeing up the Arduino for more fun! The...... Listed under: [LED Projects](#)

574. [OH HAI! on Windows 10 IoT Core](#)

Oh, Hai Hai ('hi') is an integration point for several stand alone smart home technologies. Hai runs on the Raspberry Pi and can be adapted to optimize electricity consumption (lighting/HVAC) and water usage (irrigation/rain collection) in a number of ways. Hai was originally envisioned for...... Listed under: [Other Projects](#)

575. [Persistence Of Vision](#)

Persistence of vision is an optical illusion, it works on a simple phenomenon how our day to day television works. MY first pov was six months before with arduino uno and with motor. However it is best to have a small and portable device that…… Listed under: [LED Projects](#)

576. [Cellular Data Logger](#)

I have been collecting data from Raleigh's trails and parks for the last couple years. My primary platform has been a custom Arduino board I developed for low-cost (hey, these things may get damaged or stolen) and long battery life. I wanted a connected sensor…… Listed under: [Internet – Ethernet – LAN Projects](#)

577. [AVR VideoBlaster](#)

More VideoBlasting So why didn't the TVout library reach any higher resolution than 160×100? The answer is simple. They did not use any hardware onchip to push the pixels out. If you use the SPI to push the pixel you will gain an immediate 1:1…… Listed under: [Video – Camera – Imaging Projects](#)
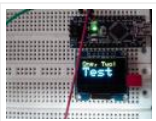
578. [POV Cylinder with Arduino Due](#)

Introduction This is my first Arduino project. My work was inspired by several maker projects that created Persistence of Vision Displays [2,3,4]. Persistence of vision (POV) refers to the optical illusion whereby multiple discrete images blend into a single image in the human mind and believed to be…… Listed under: [LED Projects](#)

579. [Programming the ATtiny85 (Using an Arduino Uno)](#)

Today, we are going to build a circuit to program an ATtiny85 with our Arduino. Supplies We are going to need the following: Some jumper wires 1 x 10 micro farad capacitor The ATtiny85 Chip A breadboard An Arduino For Extra visual's (that are not…… Listed under: [Arduino Programmer Projects](#)

580. [OLED on the Cheap!](#)

I like cheap electronics for playing. Cheap is good for budget conscious hobbyists and China is delivering lots of toys for playing – one being the inexpensive "mono" OLED displays. The single-color displays often come in a dual-color implementation where the top row of pixels…… Listed under: [LED Projects](#)
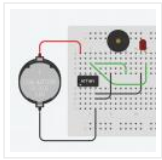
581. [3D-Printed Prank Vibrating Cup](#)

Picture the following: you have an nice white cup in front of you. It's filled to the brim with sparkling, cool, and refreshing H20. Your fingers curl around the nicely curved handle, and you bring the cup to your lips. Suddenly, a strong vibration assaults…… Listed under: [Game – Entertainment Projects](#)

582. [3D-Printed RGB Wallet](#)

Stand out from the crowd with this unabashedly ostentatious excuse for a wallet. It's got plenty of space, RGB lights, and you can even put your name on it for added vanity. Interested? Keep reading! In the files section of this build you can find…… Listed under: [LED Projects](#)

583. [The Annoy-O-Bug: A Chirping Light-Up Throwie](#)

Small enough to slip in a mint tin, yet loud enough to be heard across a house at only a few dollars per unit. A nice combination for a pretty good prank! Let's dive in! Step One: The Circuit You can purchase the printed circuit…… Listed under: [LED Projects](#)

584. [nRF24L01+ with ATtiny85 3 Pins](#)

This would be the continuation of my previous project Programming ATtiny85 with Arduino Uno. Now with cheaper ATtiny85 in place I was looking for cheaper ways to transmit the sensor data. Which brought me to nRF24L01+ a cheap, low power RF transceiver. This seemed to…… Listed under: [Other Projects](#)

585. [A Strange Attraction. Various Hall Effect Sensors](#)

I came pretty close to calling this one "Magnets, How do they work?" But I thought that might confuse more than it would amuse. All jokes aside, hall effect sensors are pretty cool, and also pretty simple to use, but there are a few types…… Listed under: [Sensor – Transducer – Detector Projects](#)

586. [Simple Temperature With Thermistor + Arduino](#)

A Thermistor is a thermal-resistor. It's just a simple device that changes it's resistance based on temperature. If the LRD/Photoresistor is day of of arduino class. The thermistor should be day 1.01. (Can I do that?). If you need precise temperature readings, this is not…… Listed under: [Temperature Measurement Projects](#)

587. [Use The EasyDriver Stepper Motor Driver + Arduino](#)

Stepper (or step) motors are really cool. They are perfect for automation or any time you need a motor to turn to a specific point, at a specific speed, in a specific direction. For this article I wont get into why, or how, but unlike…… Listed under: [Motor Projects](#)

588. [Do You Have The Time? DS1307 RT Clock + Arduino](#)

Most microcontrollers are time-agnostic, meaning they are unaware of the time around them, but that's ok as most things we make have no need for it. But… every once in awhile you come up with an idea that requires knowing the actual time. Mostly this…… Listed under: [Clock – Timer Projects](#)

589. [How to Get Started with the ESP32](#)

ESP32 is the hottest new wireless chip out there, offering both WiFi and Bluetooth Low Energy radios rolled up with a dual-core 32-bit processor and packed with peripherals of every kind. We got some review sample dev boards, Adafruit and Seeed Studio had them in…… Listed under: [Wifi – WLan Projects](#)

590. [Are we getting close? Proximity Sensors + Arduino](#)

In past tutorials, we have covered temperature, color, time, direction, but never distance or proximity. I think I strayed away from this because most of the lower cost proximity sensors are pretty drop-dead-simple to use and thought it might not be that useful. But the…… Listed under: [Sensor – Transducer – Detector Projects](#)

591. [Arduino: Individually Control Shift Register Pins](#)

If you want an article on general 74hc595 shift register usage with detailed explaination on how it works/what it's doing, you want this article here: http://bildr.org/2011/02/74hc595/ The following code and library are compatible with arduino software 1.0+ ONLY. You can download the newest version of...... Listed under: Other Projects

592. Polar Heart Rate Monitor Interface + Arduino

The following code and library are compatible with arduino software 1.0+ ONLY. You can download the newest version of the arduino software here. When you start to talk about biometrics in electronics, heart-rate is usually the first thing to come up. And why not? I...... Listed under: LED Projects

593. Quickly: KS0108B Graphic LCD 128×64 + Arduino

This is an incredibly quick post, and it is actually here simply because this thing was a pain to figure out how to hook it up. But, I wasn't able to do anything with it more than the Arduino library was able to do out...... Listed under: LCD Projects

594. L3G4200D Tripple Axis Gyroscope + Arduino

Before we begin, just note, that while this all works, I believe the output is scaled wrong. The noise floor is very high. But from everything I have found it looks like this is how it is. We have covered, accelerometers, GPSs, compasses... But no...... Listed under: Sensor – Transducer – Detector Projects

595. Sensing Barometric Pressure | BMP085 + Arduino

Light, location, temperature... What's next? Well, how about Barometric pressure? You know.. that thing that determines so much of our weather. Well the BMP085 Barometric Pressure sensor, available at SparkFun is a great little sensor capable of sensing such small changes in barometric pressure it...... Listed under: Sensor – Transducer – Detector Projects

596. A Slow Display… E-Paper + Arduino

Most notable for its inclusion in the Kindel and other E-Readers, E-Paper has recently become very popular. But until very recently been out of reach to being used in personal projects. Luckily for us, SparkFun started selling and E-Paper display, and breakout board finally bringing...... Listed under: LCD Projects

597. ESP32 Tutorials

The ESP8266 has become one of those ubiquitous parts that everyone knows. However, the new ESP32 has a lot of great new features, too. If you want to take the ESP32 for a spin, you should check out [Neil Kolban's] video series about the device. When we...... Listed under: Wireless Projects

598. ESP32 Hands-On: Awesome Promise

The ESP32 is looking like an amazing chip, not the least for its price point. It combines WiFi and Bluetooth wireless capabilities with two CPU cores and a decent hardware peripheral set. There were modules in the wild for just under seven US dollars before...... Listed under: Wifi – WLan Projects

599. ESP32 Arduino: LED PWM fading

The objective of this post is to explain how to fade a LED with the ESP32, using the LED PWM functionalities. Introduction The objective of this post is to explain how to fade a LED with the ESP32, using the LED PWM functionalities of the...... Listed under: [LED Projects](#)

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600. [ESP32 With Arduino IDE](#)

Christmas 2015 yours truly was one of the lucky few in the world to receive the ESP32 for experimenting. The board was not assembled, and it was quite intimidating to assemble the board with just a fine tip solder. The experiment is documented at this...... Listed under: [Development Board – Kits Projects](#)

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601. [Sensing color with the ADJD-S311 + Arduino](#)

A year ago we had an article called Sensing color with the ADJD-S371. Well the ADJD-S371 is long gone, and its replacement is the ADJD-S311 (breakout board available from sparkfun). It is basically the same all around, so without shame, I will be copying a...... Listed under: [Sensor – Transducer – Detector Projects](#)

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602. [Rotary Encoder + Arduino](#)

One of the first things anyone does when they start working with the Arduino is to connect it to a potentiometer and control the brightness of and LED or move a servo. Well, a rotary encoder may look like a potentiometer, but other than also...... Listed under: [LED Projects](#)

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603. [High Sensitivity Light Sensor TSL230R + Arduino](#)

A while back we covered the TEMT6000, a great little analog sensor for getting ambient light readings when you need something a bit more sensitive than a simple Photoresistor. Well in the spirit of documenting everything we can get our hands on, this week we...... Listed under: [Sensor – Transducer – Detector Projects](#)

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604. [Sensing Weight With A Flexiforce + Arduino](#)

Felxiforce is a force sensor that is very similar to FSRs we just wrote about in principal. They change their resistance when you apply force to them. (The flexi part of the name is because they are flexible) Felxiforces are about twice as expensive as...... Listed under: [Sensor – Transducer – Detector Projects](#)

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605. [Touch Sliders With A Softpot + Arduino](#)

You all know the potentiometer, you turn it, and you can read on your arduino where it was turned to. Well 3M makes a product called the softpot that is a linear touch potentiometer. So instead of turning a knob, you touch it. The really...... Listed under: [Sensor – Transducer – Detector Projects](#)

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606. [Can You ID This? ID-20 RFID Reader + Arduino](#)

A few weeks ago we showed you how to control your arduino over serial. Well this week are going to do the same thing. Only this time instead of using the serial monitor to send the commands, we will be using the Innovations ID line...... Listed under: [Sensor – Transducer – Detector Projects](#)

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607. [Turn on a light, or 10. Arduino control over serial](#)

This is something I use all the time, so I figured I would share it with you. Controlling an Arduino over serial can be extremely simple if you let it, and extremely useful if you know how to use it. Many languages such as Processing…… Listed under: [LED Projects](#)
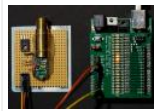
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608. [Tilt Sensing with the RPI-1031 + Arduino](#)

Once in a while something comes out that I think is going to be really awesome, but when you get it, it is just so so. Im sure you all know what I mean… But yeah… This is one of those. The RPI-1031 available from…… Listed under: [Sensor – Transducer – Detector Projects](#)

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609. [High-Power Control: Arduino + N-Channel MOSFET](#)

Eventually you are going to find yourself holding a 12v solenoid, motor, or light and wondering "How the heck am I supposed to control this from my Arduino?" And we have covered this in the past. Today we are going to talk about another way…… Listed under: [Other Projects](#)

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610. [Create laser range finder using arduino](#)

[highlight bgcolor="ffbb00"]I have collected 2 methods to create laser range finder, one is very simple but for hobbiest the first one using arduino clock but it comes with errors. Its just to conceptulize how we can create range finder. The second one with the The 7558…… Listed under: [LED Projects](#)

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611. [Stable Orientation – Digital IMU 6DOF + Arduino](#)

A while back we wrote an article on sensing orientation with the adxl335 accelerometer. In that article I mentioned all the drawbacks of trying to do this with just an accelerometer, and said that if you needed something stable, what you really needed was an…… Listed under: [Metering – Instrument Projects](#)

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612. [Controlling 2 motors with the TB6612FNG + Arduino](#)

First off: I know… we went overboard with the motor illustration. In previous articles we have discussed how to control motors with simple transistors. And… with PWM you could control the speed. But that is just one motor, and you can only go one direction……. Listed under: [Motor Projects](#)

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613. [A Swarm of Xbees! Arduino Xbee Wireless & More](#)

In the past we have covered a few things that interact through serial, from RFID readers to controlling an Arduino's pins using the serial terminal. Serial as we have talked about it is actually know as UART, and operates over 2 pins RX and TX…… Listed under: [Other Projects](#)

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614. [How's the weather? TMP102 + Arduino](#)

The TMP102 is a very simple, yet accurate, ambient temperature sensor which is capable of detecting .0625ºC changes between -25 and +85°C, with an accuracy of 0.5°C. And the real kicker… It does all of this while only consuming 10μA (10 millionths of an amp)……. Listed under: [Sensor – Transducer – Detector Projects](#)

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615. [One Wire Digital Temperature. DS18B20 + Arduino](#)

 I know… you are probably thinking "Another Thermometer! How many do you need to cover?" – Well… All of them. But really, they all have something different to offer. For instance this guy, the DS18B20, has a unique serial-number sent with it's data, so if…… Listed under: [Sensor – Transducer – Detector Projects](#)

616. [Pin Control Over the Internet – Arduino + Ethernet](#)

 In a previous article we showed you how to control digital pins over over serial, and showed how such a simple thing can be so powerful. One major downfall with that is you need to be nearby to send commands… So today we are going…… Listed under: [Internet – Ethernet – LAN Projects](#)

617. [Getting Data From The Web – Arduino + Ethernet](#)

 Yesterday we covered how you would go about controlling pins of your arduino over the internet using the Arduino Ethernet Shield set up as a server. Today we are going to take a look at using the shield as a client to get information off…… Listed under: [Internet – Ethernet – LAN Projects](#)

618. [Get Touchy – Nintendo DS Touch Screen + Arduino](#)

 It seems like touch screens are plastered on every consumer electronic device from your phone to your refrigerator. And why not right? Well, even though those beautiful multitouch hi-res screens are a little pricy and crazy hard to develop with, doesn't mean we cant still…… Listed under: [Other Projects](#)

619. [Sensing Humidity With The SHT15 + Arduino](#)

 The SHT15 is a digital humidity sensor that outputs a fully calibrated humidity reading. And… because what we are measuring is actually relative humidity, and relative humidity being relative to temperature, the SHT15 has a builtin digital thermometer. This makes things much easier to work…… Listed under: [Sensor – Transducer – Detector Projects](#)

620. [Proximity Sensing with the VCNL4000 + Arduino](#)

 I'm not really sure why, but proximity sensors are some of my favorite things in the sensor world. Maybe because there are so many of them? Who knows. Whatever the reason, the VCNL4000 is another proximity sensor that caught my eye, so I picked one…… Listed under: [Sensor – Transducer – Detector Projects](#)

621. [Force Sensitive Resistor + Arduino](#)

 The Force Sensitive Resistor, or FSR is one of those parts that fills bins in interaction design labs across the world. It's a simple guy, a finicky guy, but it has its place in the maker toolbox. A FSR is just what it sounds like…… Listed under: [Sensor – Transducer – Detector Projects](#)

622. [Sensing Capacitive Touch – MPR121 + Arduino](#)

 Every now and then you get sick of the typical push buttons and you want something cooler. And what is cooler than touch sensitive things? Remember that old lamp in your Grandma's that changed brightness just by touching the base? Yeah, that's right… We are…… Listed under: [Sensor – Transducer – Detector Projects](#)

623. [High-Power Control: Arduino + TIP120 Transistor](#)

Up until now, we have talked about working with a lot of low-power devices. Sensors, LEDs, ICs, and the like are all capable of being powered directly from your Arduino, but as many awesome 5 and 3.3v components as there are, eventually you will find...... Listed under: [Other Projects](#)

624. [Controlling a ton of servos – TLC5940 + Arduino](#)

This is something we have been asked a lot about. How do I control a ton of Servo motors with my arduino? Well... using the TLC5940 is one way. And this nice break outboard from sparkfun makes connecting a ton of servos easy. The output...... Listed under: [PWM Projects](#)

625. [Sensing Orientation With The ADXL335 + Arduino](#)

I know, I know, this one has such a simple name. Where's the pun? Honestly, the description was just to long to include one. Maybe it could have been "What's Up? Sensing Orientation With The ADXL335 + Arduino" – Ehhh... Probably not. A few weeks...... Listed under: [Sensor – Transducer – Detector Projects](#)

626. [Triple Axis Magnetometer HMC5883L + Arduino](#)

One of the first articles we did was on the hmc6352 digital compass. Well this is his older brother (or younger but smarter). I really don't know what to say about the HMC5883L other than it is a three axis magnetometer, so it is capable...... Listed under: [Metering – Instrument Projects](#)

627. [Displaying on Paper – Thermal Printer + Arduino](#)

The following code and library are compatible with arduino software 1.0+ ONLY. You can download the newest version of the arduino software here. Outputting data can be extremely useful, and typically when we look at doing this, it is either to the Arduino's serial terminal,...... Listed under: [Other Projects](#)

628. [Long Distance Remote Light Sensor With RFM95W/RFM98W LoRa](#)

There are many wireless communication options when connecting Arduino boards. One of the most popular ones is the Wi-Fi. It works well at small distances, and around Wi-Fi hotspots, however when the modules need to connect over long distance at areas where Internet is not...... Listed under: [Sensor – Transducer – Detector Projects](#)

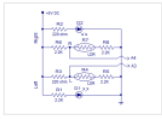629. [Arduino Nano: Flame Sensor With Visuino](#)

Recently somebody asked for tutorial on Infrared Flame Sensor. It took a while due to severe work overload, but finally I succeeded to make it. The Infrared flame sensors use infrared light to detect flame. While experimenting with my one I discovered that in direct...... Listed under: [Sensor – Transducer – Detector Projects](#)

630. [Capturing IMU Data with a BNO055 Absolute Orientation Sensor](#)

The Bosch BNO055 combines tri-axis accelerometers, gyroscopes, and magnetometers to provide orientation to users. About the Sensor The BNO055 uses three triple-axis sensors to simultaneously measure tangential acceleration (via an accelerometer), rotational acceleration (via a gyroscope), and the strength of the local magnetic field (via......
Listed under: [Sensor – Transducer – Detector Projects](#)
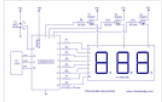
631. [Line Follower Robot using Arduino](#)

A line follower robot using 8051 microcontroller is already published here and this time the same thing is done using arduino. This line follower robot is basically designed to follow a black line on a white surface. Any way the same project can be used...... Listed under: Robotics – Automation Projects
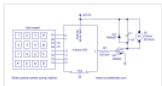
632. Ultrasonic range finder using arduino

Ultrasonic range finder using 8051 mictrocontroller has been already published by me in this website. This time it is an ultrasonic range finder using arduino. HC-SR04 ultrasonic range finder module is used as the sensor here. The display consists of a three digit multiplexed seven...... Listed under: Other Projects

633. Digital thermometer using arduino and LM35

This article is about a simple three digit digital thermometer using arduino. Range of this thermometer is from 0°C to 99.9°C. There is also a provision for displaying the temperature in °F scale. Three terminal analog temperature sensor LM35 is used as the sensor here....... Listed under: Metering – Instrument Projects

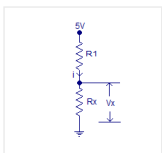634. PWM motor speed control using Arduino

PWM or pulse width modulation is a very common method used for controlling the power across devices like motor, light etc. In PWM method the power across the load is controlled by varying the duty cycle of the drive signal. More the duty cycle more...... Listed under: Motor Projects

635. Interfacing LCD to Arduino – Display Text and Characters on LCD Screen using Arduino
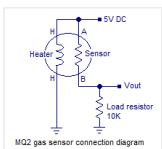
A Liquid Crystal Display commonly abbreviated as LCD is basically a display unit built using Liquid Crystal technology. When we build real life/real world electronics based projects, we need a medium/device to display output values and messages. The most basic form of electronic display available...... Listed under: LCD Projects

636. OhmMeter using Arduino – with Auto Ranging Feature

Auto ranging ohmmeter using arduino. This article is about a simple auto ranging ohmmeter using arduino. The measured resistance is displayed using a 16×2 LCD display. The circuit is sufficiently accurate and uses minimum number of external components possible. Before going into the details of...... Listed under: Metering – Instrument Projects

637. LPG sensor using arduino

LPG sensor using arduino with alarm and cutoff. A simple LPG sensor using arduino is shown in this article. This circuit indicates the amount of LPG in the air. The circuit sounds an alarm and trips a relay when the concentration is above a predetermined...... Listed under: Sensor – Transducer – Detector Projects

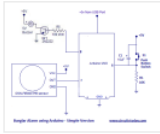638. Interfacing RFID with Arduino – How to Read RFID Cards using Arduino

In this tutorial, we are dealing with yet another interfacing technique. This time we are interfacing an RFID Reader which can read RFID Tags to Arduino. RFID is Radio Frequency Identification. An RFID reader is used to read RFID tags (which contain certain unique data...... Listed under: Other Projects
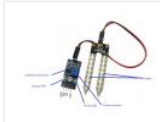
639. Simple RFID based Door Lock using Arduino

Its quiet fun to work with RFID based projects! In the previous article, we saw how to interface RFID with Arduino. Interfacing is the first step to create any useful project. So why don't we create an RFID based Access Control System or an RFID...... Listed under: [Security – Safety Projects](#)

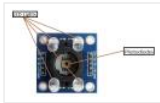640. [Burglar Alarm using Arduino and PIR Sensor](#)

In this tutorial, we are building an interesting application using Arduino and PIR Sensor. A Burglar Alarm – is basically an intruder alarm or an anti theft alarm. So this project is all about building an anti theft alarm or an intruder alarm using Arduino...... Listed under: [Sensor – Transducer – Detector Projects](#)

641. [Arduino and Soil Moisture Sensor](#)

In this article, we are going to interface a Soil moisture sensor FC-28 with Arduino. This sensor measures the volumetric content of water inside the soil and gives us the moisture level as output. The sensor is equipped with both analog and digital output, so...... Listed under: [Sensor – Transducer – Detector Projects](#)

642. [Interface Arduino and Color Sensor – RGB Sensor TCS230](#)

In this article, we are going to read the colors using the TCS230 color sensor (RGB Sensor) and Arduino Uno. The TCS 230 color sensor senses the color light by using the photodiodes. The sensor converts the readings from the photodiode into a square wave by...... Listed under: [Sensor – Transducer – Detector Projects](#)
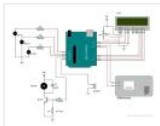
643. [Pulse Sensor and Arduino – Interfacing](#)

In this article, we are going to interface a Pulse Sensor with Arduino. The pulse sensor we are going to use is a plug and play heart rate sensor. This sensor is quite easy to use and operate. Place your finger on top of the sensor...... Listed under: [Sensor – Transducer – Detector Projects](#)

644. [Interfacing Accelerometer to Arduino](#)

In this article, we are going to interface the GY-521 accelerometer with Arduino. The GY-521 has an InvenSense MPU6050 chip which contains a 3-axis accelerometer and a 3-axis gyro meter. This makes it a 6 DOF IMU (6 degrees of freedom inertial measurement unit). The chip...... Listed under: [Metering – Instrument Projects](#)

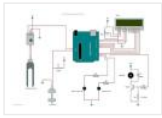645. [Home Automation using Arduino and GSM Module](#)

In this article, we are publishing a highly useful home application – GSM based home automation using Arduino. The project consists of a 16×2 LCD module for displaying the status of the home appliances. The status (turn ON or turn OFF) of the connected devices can...... Listed under: [Home Automation Projects](#)

646. [Robot using Arduino and Bluetooth Module (Obstacle Avoidance Robot)](#)

This project is designed to build a robot that automatically detects the obstacle on its path and guides itself whenever an obstacle comes ahead of it. This robotic vehicle is built, using Arduino UNO board. An ultrasonic sensor is used to detect any obstacle ahead...... Listed under: [Robotics – Automation Projects](#)

647. [Arduino Irrigation and Plant Watering using Soil Moisture Sensor](#)

This project is about a moisture-sensing automatic plant watering system using Arduino UNO. The system reads the moisture content of the soil using soil moisture sensor and switches ON the motor when the moisture is below the set limit. When the moisture level rises above...... Listed under: [Sensor – Transducer – Detector Projects](#)

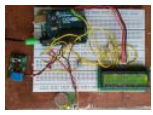648. [IOT based Home automation and Security system](#)

IOT has become huge trend in the last couple of years. With growing needs in connected devices many companies have shifted the attention to iot market. Today we are going to share a simple project which we have built – IOT based home automation and...... Listed under: [Security – Safety Projects](#)

649. [Arduino based voting system](#)

Voting systems are one of the finest examples of Embedded devices and applications. The complexity and robustness of a voting system depends on the number of voters involved. Here you could see a simple Arduino based voting system that would be a great fit for...... Listed under: [Security – Safety Projects](#)

650. [Arduino Weather machine](#)

Arduino is a great hardware platform when comes to prototyping and building cool stuffs. Using this i have designed and developed a simple Arduino Weather machine which measures three important parameters Temperature, Light intensity and Humidity and predict the weather condition according to the measured...... Listed under: [Other Projects](#)

651. [Bluetooth enabled Door locker using Arduino](#)

DIY Arduino based lockers can be found plenty in the internet where keypad was used to feed lock input. But this Bluetooth enabled Door locker uses Bluetooth as a medium to connect with the locker and your smart phone to feed input credentials. This locker...... Listed under: [Security – Safety Projects](#)

652. [Remote controlled light effects using Arduino](#)

Christmas is just around the corner and its time to start planning things to lighten up this festive season. Today you are about to see building of Remote controlled lights with adjustable lighting effects using Arduino. The coolest thing about this project is controlling the...... Listed under: [Other Projects](#)

653. [Visitor counter project using Arduino](#)

People or Visitor counters are pretty famous embedded application that was widely used in places like theaters, malls, Transport stations and so. High end counters uses sophisticated hardware to do the process of counting. Today we are about to see building of simple Visitor counter...... Listed under: [Sensor – Transducer – Detector Projects](#)

654. [Reflex test for your brain using Arduino](#)

Arduino based games and consoles are quite popular around the web. And this article is going to bring out the Design, working and code part of a simple Reflex test / trainer using Arduino Uno. Reflex tests are usually carried out to determine how quick...... Listed under: [Other Projects](#)

655. [Stunning RGB light effects using Arduino Nano](#)

None of us could deny the fact that we would love with to play with LED's and lighting stuffs. I love to play with LED's and create attractive lighting effects. This project was a result of such attempt where i created a stunning RGB light...... Listed under: [Other Projects](#)

656. [Fun DIY project – piano using Arduino](#)

Here is yet another application you can put your Arduino to use. This will be an interesting DIY to make even though you are not very much into music. Though you cannot expect music out of this but still it will be a fun project...... Listed under: [Other Projects](#)

657. [Keyless piano using Arduino uno](#)

Keyless piano using Arduino is sort of sequel to the DIY fun piano i have published in this website. In this project i have eliminated the need of buttons involved to play the piano. Here i have used IR in place of buttons. Let's get...... Listed under: [Other Projects](#)

658. [Project X – Smart home control using Arduino](#)

Project X – Smart home control using Arduino is all about automating your home smartly. Imagine your home responding to external condition by altering itself and that's exactly what this project enables your home to do. Also this product features manual control just in case...... Listed under: [Other Projects](#)

659. [Electronic Spinet – Musical instrument using Arduino](#)

Spinet it is a vintage musical instrument which has similar looks of a keyboard. It always get better when Technology touches the vintage stuffs. So we decided to build a simple Electronic Spinet using Arduino without using any keys. This project use of ultrasonic sensor...... Listed under: [Other Projects](#)

660. [Garduino – Automatic plant watering system](#)

During summers, most people are too lazy to water the potted plants every day and plants will eventually wither if people go out on vacation. Here is a simple Automatic plant watering system that can water plants in your absence. It is an Arduino based...... Listed under: [Other Projects](#)

661. [Wireless notice board using Arduino and GSM](#)

Everyone would have known the use of notice board around our daily life. Even it plays a vital role in public places like bus stops, railway station and hospitals. But with a great shift in technology we could revolutionize this kind of notice board by...... Listed under: [Other Projects](#)

662. [Three level Ultra security system using Arduino](#)

Today we are in a world where robbery has increased to a great extent. Hence there is a need to protect everything using a security system. Here is a small project on security system called ULTRA SECURITY SYSTEM which will be very useful. This system...... Listed under: [Security – Safety Projects](#)

663. [Smart Vehicle using Arduino Uno](#)

Everything around us is getting smart shoes, watches glasses. Even you might have come across news regarding smart vehicles in newspaper. Likewise we attempted to create a prototype of smart vehicle using Arduino. Let's get into the building part of our smart vehicle.   INPUT PERIFERALS:…… Listed under: [Other Projects](#)

664. [Automatic Plant watering and Happiness monitoring system](#)

The main motto of this project is to provide automatic water supply to plant when it feels thirsty. We intend to automate the watering of plants and deploy Arduino to do the job for us. This will take care of the water requirements of a…… Listed under: [Other Projects](#)

665. [Voice controlled home automation using Arduino](#)

Ever thought of controlling your home using voice. If you are the one who fascinated it as I do, this project might help you do it for real. Voice powered products are already taking over the market and this voice controlled home project will enable…… Listed under: [Home Automation Projects](#)

666. [IQ Alarm clock using Arduino for heavy sleepers](#)

Raising from bed can be the most painful thing you could ever do. We often set alarms to wake up but ends up in snoozing it out or even kick the alarms away. To address this we have come up with an Arduino project "…… Listed under: [Clock – Timer Projects](#)

667. [Gesture controlled car using Arduino](#)

 Who doesn't love playing with RC cars and Robots. Not only playing, engineers and enthusiasts like us love to build and experiment with these stuffs. Also its fair to say that RC's and Robots have became more than just toys, they already have started…… Listed under: [Sensor – Transducer – Detector Projects](#)

668. [How to use position wheels with your Arduino](#)

Hello everyone, em here today with an interesting tutorial on using position wheels using your favorite Arduino. The whole idea behind this article is to explain the logic behind position wheels, the way it works and how to implement it in your project. If you prefer…… Listed under: [Other Projects](#)

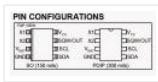669. [The Zambroombi: Roomba's Next Ultrasonic Competitor](#)

The Zambroombi is the next step up from your neighbor's fancy Roomba. Set it and forget it! "It changed my life. I don't know where I'd be today without it. I used to just have to clean everything once, but thanks to The Zambroombi, I…… Listed under: [Other Projects](#)

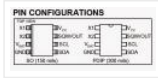670. [How to Make Arduino Based Collision Detection Warning System](#)

This is arduino based collision detection warning system. This kind of system is fastest growing safety feature in automotive industries. Such system enables vehicles to identify the chances of collision and give visual and audio warning to driver. So that driver can take necessary action…… Listed under: [LED Projects](#)

671. [Interfacing Arduino with DS1307 real time clock](#)

This topic shows how to interface Arduino with DS1307 real time clock to make a clock and calender. To understand the project and code easily you have to read the datasheet of the DS1307. DS1307 Pin assignment: The picture is taken from ds1307 datasheet and…… Listed under: [Clock – Timer Projects](#)

672. [Arduino Real Time Clock Using DS1307](#)

This topic shows how to interface Arduino with DS1307 real time clock to make a clock and calender. To understand the project and code easily you have to read the datasheet of the DS1307. DS1307 Pin assignment: The picture is taken from ds1307 datasheet and…… Listed under: [Clock – Timer Projects](#)

673. [Arduino 4-Digit 7-Segment LED Display](#)

7 Segment LED displays are used in many applications as front panel number indicators. The most common applications are calculators, microwave ovens, electronic lab equipment like function generators and frequency counters. A 7 segment LED display consists of 7 LEDs arranged in such a way…… Listed under: [LED Projects](#)
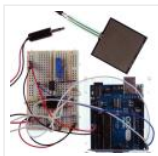
674. [Robot "Cheaper"](#)

The aim is to build cheapest possible Arduino-robot Step 1: Components Arduino UNO R3 x1 USB cable x1 Mini solderless breadboard x1 IR sensor x1 Continuous rotation servo x2 Battery holder x1 AA battery x4 Bunch of color wires Step 2: Getting Started With Arduino…… Listed under: [Robotics – Automation Projects](#)

675. [Make Your Own GPS Transmitter with the HC-12 Transceiver](#)

The first article in this two-part series, Understanding and Implementing the HC-12 Wireless Transceiver Module, uses the HC-12 to create long-distance data transmission between two Arduino Unos. This article uses a pair of HC-12 transceivers, a GPS module, an Arduino, and Google Maps to create…… Listed under: [GPS Based Projects](#)

676. [Flash Freeze Photography with an Arduino](#)

Freeze moments in time to easily produce extraordinary close-up pictures with your digital camera, an Arduino, and these simple circuits. I have always been impressed by high-speed photography. The photographic capture of what normally goes unseen, or at least unnoticed, is intriguing and oftentimes beautiful……. Listed under: [Game – Entertainment Projects](#)

677. [Create a Motion-Sensing Alarm with an Arduino and IR Sensors](#)

Infrared (IR) sensors are normally used to measure distances, but they can also be used to detect objects. By connecting a couple of IR sensors to an Arduino, you can make an intruder alarm. Overview Infrared (IR) sensors are normally used to estimate the distance of an…… Listed under: [Sensor – Transducer – Detector Projects](#)

678. [Controlling a Stepper Motor with an SIRC TV Remote and a PICAXE: Infrared Capabilities](#)

This is part one of a two-part project. For part one, we will focus on IR remotes and signaling, as well as IR reception and decoding. Using IR (InfraRed) radiation to control electronic devices is widely accepted and implemented. IR devices are routinely used in…… Listed under: [Other Projects](#)

679. [Quark D2000 I2C Interfacing Add a Color Sensor and Asynchronous Mode](#)

We finish up our project using I2C on the Quark D2000 development board with the addition of a color sensor and an object color identifier program. Finally, we revisit interfacing the BH1750FVI ambient light sensor using asynchronous mode I2C. Before continuing in this article, consider...... Listed under: [Sensor – Transducer – Detector Projects](#)

680. [Quark D2000 I2C Interfacing: Add a Light Sensor and an LCD](#)

Get acquainted with using I2C with the Quark D2000 development board by interfacing an ambient light sensor and an LCD. Previously, we presented a general overview of the Quark D2000 development board. Subsequently, we explored the use of the board's GPIO and PWM. In this...... Listed under: [Sensor – Transducer – Detector Projects](#)

681. [The Santa Cam! An Arduino PIR Motion-Activated Camera System](#)

The Santa Cam is sure to catch who is stealing your milk and cookies this holiday season! You can even use it for a photo booth this New Year's Eve! BOM: Arduino Uno DSLR camera with remote shutter jack 2.5mm TRS cable Rectifier diode Milk...... Listed under: [Other Projects](#)

682. [Building a simple digital light meter using Arduino and BH1750FVI sensor](#)

A light meter is a device that measures the intensity of light. It finds applications in schools, hospitals, production areas, passageways and more to measure and maintain proper lighting levels. It is often used by photographers to determine the proper exposure for a photograph. Today...... Listed under: [Sensor – Transducer – Detector Projects](#)

683. [MCP9802 temperature sensor and Arduino](#)

MCP9802 is a digital temperature sensor from Microchip that measures temperatures between -55°C and +125°C to a digital word. It provides an accuracy of ±1°C (maximum) from -10°C to +85°C. The MCP9802 sensor comes with user-programmable registers that provide flexibility for temperature sensing applications. The...... Listed under: [Sensor – Transducer – Detector Projects](#)

684. [Step-by-step guide for making a very simple temperature and humidity meter with 7-segment LED displays](#)
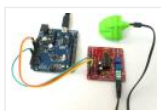

In this blog post, I am providing you step by step instructions to build a very simple temperature and relative humidity meter for indoor use. All you need to build this project are an Arduino Uno or compatible board, a DHT11 sensor, and a MAX7219...... Listed under: [LED Projects](#)

685. [High-voltage seven segment LED display driver with SPI interface](#)

Seven segment LED displays are known to be resource and power hungry. But because they are visually so charming and readable from a far viewing distance and at a much wider viewing angle as compared to any other electronic displays, they are still hugely popular....... Listed under: [LCD Projects](#)

686. [PC-based heart rate monitor using Arduino and Easy Pulse sensor](#)

The heart rate, also referred to as pulse rate, has been recognized as a vital sign since the beginning of medicine, and it is directly related to a person's cadiovascular health. Today, we are going to make a PC-based heart rate monitor system using an...... Listed under: [Sensor – Transducer – Detector Projects](#)

687. [Arduino measures heart beat rate from fingertip](#)

The PIC16F628A based heart rate meter is one of the most popular projects published on Embedded Lab. In this article, I am going to show how to replicate the same project using a simpler platform like Arduino. The Arduino heart rate meter will use Arduino...... Listed under: [Medical – Health based Projects](#)

688. [Using BMP180 for temperature, pressure and altitude measurements](#)

The BMP180 is a new generation digital barometric pressure and temperature sensor from Bosch Sensortec. In this tutorial, we will briefly review this device and describe how to interface it with an Arduino Uno board for measuring the surrounding temperature and pressure. We will also discuss about...... Listed under: [Temperature Measurement Projects](#)

689. [Arduino Crowtail and Easy Pulse Plugin](#)

Arduino Crowtail is a modular and ready-to-use building block set from Elecrow for rapid prototyping with Arduino. It consists of a base Arduino Uno shield to which various sensor and I/O modules can be conveniently interfaced through standardized connectors. In this example, I am going to illustrate...... Listed under: [Other Projects](#)

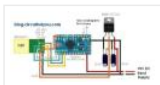690. [Controlling relay switches with an infrared remote](#)

The infrared (IR) communication technology, which existed long before WiFi and Bluetooth, is still a key component in implementing major components of a typical home automation system. For example, IR technology is still used in cordless headphones, for intrusion detection in home security systems, and in handheld...... Listed under: [Other Projects](#)
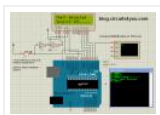
691. [Serial seven segment LED display shield](#)

Seven segment LED displays are brighter, more attractive, and provide a far viewing distance as well as a wider viewing angle compared to LCD displays. This project describes a serial seven segment LED display shield for Arduino Uno or compatible boards. The shield consists of...... Listed under: [LED Projects](#)

692. [Wireless Serial using nRF24L01](#)

This project is very useful in many application where wireless reliable serial communication is required. It give bidirectional communication, You need to have same code in both arduino, no need of separate configuration for receiver or transmitter. It is more advantageous and cost saving than using Xbee,...... Listed under: [Other Projects](#)

693. [GSM Based Home Security System With SMS Alert](#)

This project has GSM technology and anti-theft system using PIR motion detection. Whenever Motion is detected it sends the SMS on predefined mobile number. We have connected PIR Motion sensor with this project. GSM based home security system with SMS alert, it uses PIR Motion Sensor,...... Listed under: [Home Automation Projects](#)
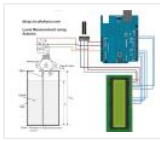
694. [pH sensor arduino](#)

In this project, step by step tutorial we are discussing about how to interface pH sensor with Arduino. In chemistry, pH is the negative log of the activity of the hydrogen ion in an aqueous solution. Solutions with a pH less than 7 are said...... Listed under: [Sensor –](#)

Transducer – Detector Projects

695. [Low cost continuous pricision liquid level measurement using arduino](#)

The purpose of this turorial is to demonstrate an innovative approach for low cost continuous liquid level monitoring based on MPX5010DP differential pressure sensor. Most of the traditional measuring systems were designed and implemented by complicated hardware circuitry. It made the product expensive, with low functionality...... Listed under: [Other Projects](#)

696. [LCD interfacing with arduino](#)

In this tutorial we'll be looking at how to connect interface parallel LCD to an Arduino. We are using 16 char x 2 Line LCD known as 16×2 LCD, you can usually identify this display by the 16-pin interface. You only need to solder 10 of...... Listed under: [LCD Projects](#)

697. [How to Make Your Own Arduino Clone Board](#)

Want to save money by making your own Arduino clone boards? Or want to make a custom board specifically for your needs, then this project is for you! Make Arduino board from cheap electronic components available at your local store. Just follow these simple step...... Listed under: [Other Projects](#)

698. [Create an Android Controlled Robot Using the Arduino Platform](#)

Ever wanted to make an Android controlled robot or car? Control your RC car with a smartphone? Or wanted a tutorial about connected devices and getting started with it? Now you can do that with this simple DIY hack that even provides you with a...... Listed under: [Robotics – Automation Projects](#)

699. [DIY Android Home Automation With Free Smartphone Application](#)

Ever wanted to make your home automated? Wanted to control the lights, fan, and other appliances from your smartphone? Or wanted a tutorial about connected devices and getting started with them? Our DIY Android Home Automation project will show you how to make your home...... Listed under: [Home Automation Projects](#)

700. [A Simple Guide to Using a Hall Effect Sensor With Arduino](#)

Have you ever wanted to make a project that involved contact-less sensing? For example: to detect a door closing, to count the number of revolutions of a wheel, or make a speedometer? Then this Arduino Hall Effect sensor tutorial is for you! This project uses...... Listed under: [Sensor – Transducer – Detector Projects](#)

701. [IMU Interfacing Tutorial Get started with Arduino and the MPU 6050 Sensor](#)

In this post, I will be reviewing a few basic IMU (Inertia Measurement Unit) sensors that are compatible Arduino. I will also give a short tutorial for interfacing an Arduino with the best IMU sensor available. IMU sensors like the MPU 6050 are used in...... Listed under: [Sensor – Transducer – Detector Projects](#)

702. [An Easy Way to Build an Arduino Powered Motion Sensor Alarm](#)

Have you ever wanted to build a project that had could detect the presence of a person in a room? If so, then you can do this very easily using the PIR (Passive Infra Red) Motion sensor. This Arduino motion sensor can detect the presence of a…… Listed under: [Sensor – Transducer – Detector Projects](#)

703. [DIY Music Keyboard: How to Make Sounds With Arduino](#)

Making cool things with an Arduino is something, but making musical instruments out of an Arduino is something else! So behold, here comes the Musical-duino, an Arduino keyboard. To see what this does, check out the demo video at the bottom of this page. They say…… Listed under: [Sound – Audio Projects](#)

704. [How to Make an Arduino Powered Lamp Dimmer](#)

Ever wondered how to bring an Arduino board into your daily life? We often adjust the display brightness of our mobile phones to suit to our need. With this project, you can do that for your bedside lamps or any other lighting at home. We…… Listed under: [Other Projects](#)

705. [How to Make Your First Robot Using Arduino](#)

One of the simplest projects you can make for your first time using an Arduino is an obstacle avoiding robot. If you are a beginner to Arduino and want to learn more about it, this Arduino robot tutorial will teach you the basics while you…… Listed under: [Robotics – Automation Projects](#)

706. [How to Shrink Your Arduino Projects: Making a Permanent Circuit Board](#)

When you make a project using Arduino, it usually contains a lot of jumper connections on the breadboard and the project will not be a permanent one. If you want to make any other project using that Arduino, you will have to remove all the connections made on it and to…… Listed under: [Other Projects](#)

707. [How to Make a POV Display Using LEDs and Arduino](#)

Here is a simple project using an Arduino and some LEDs. What we are going to learn here today is how to make a POV display or Persistence-Of-Vision display. It is made out of just 6$ worth of components. This tutorial gives will teach you…… Listed under: [LED Projects](#)

708. [How to Build an Arduino Speaker That Plays Music in Minutes](#)

The main thing which makes this project super simple is that this project requires only one extra component. If you are new to Arduino, this tutorial will help you get familiar with Arduino and learn the basics of Arduino programming. This musical project has a…… Listed under: [Other Projects](#)

709. [How to Make a 8bit Dot Matrix Display Using Arduino](#)

A simple project to display cool 8bit art and animation on your backpack! This is a quick and easy project you could finish off in minutes and show off to your friends. What it does is, when you move your backpack, a dot matrix display turns…… Listed under: [LED Projects](#)

710. [Interfacing: How to Make an Arduino Uno UltraSonic Range Finder!](#)

A range finder is a device used to find the distance from a point to the nearest obstacle. This device uses ultrasonic technology to measure the distance. You can consider it like an electronic, hassle-free version of a measuring tape with a measuring range of...... Listed under: [Other Projects](#)

711. [How to Make an Audio Player with Speaker Using the Arduino Uno!](#)

This Arduino project is a simple and fun project you can build in 10-15 minutes. The result of this make will be an Arduino audio player that plays ".wav" files. It consists of a speaker, a simple transistor acting as an amplifier, and a micro-SD card...... Listed under: [Other Projects](#)

712. [Bluetooth Basics: How to Control an LED Using a SmartPhone and Arduino](#)

Ever thought of controlling any of your electronic devices with your smart phone? How about a robot or any other device? Wouldn't it be cool to control them with your smartphone? Here is a simple tutorial for interfacing an Android Smartphone with Arduino via Bluetooth! Required...... Listed under: [LED Projects](#)

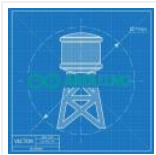713. [ESP8266 Tutorial: Programming the Onboard GPIO Pins](#)

The ESP8266 is a great tool for enabling your project to access the internet. You can plug it into an Arduino easily as shown and allow your project to communicate through the internet. Or even more exciting, to control it from anywhere in the world!...... Listed under: [Other Projects](#)

714. [Audio Amplifier Circuit on PCB Using LM386](#)

In this project, we tend to area unit getting to create a Headphone/Audio electronic equipment by exploitation self-designed PCB. This project is especially designed for amplifying the audio signal from the headphones however we will additionally use it for amplifying the subwoofer or speaker output,...... Listed under: [Sound – Audio Projects](#)

715. [How to Make a Water Level Indicator with Arduino 6 11](#)
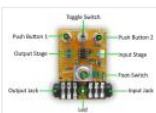
Knowing the amount of water in an overhead tank can be one tedious task. Usually, you'll end up climbing up the stairs to the tank and checking the level manually or you'll you hear the water overflowing from the top. But these days electronic water level indicators...... Listed under: [Other Projects](#)

716. [How to make a Smart Cane for the Visually Impaired with Arduino](#)

I wanted to make something for them to help the visually impaired become independent, so I created an open source Arduino project for a Smart Cane. This Arduino smart cane can assist with walking alone in new environments by taking inputs through an obstacle sensor...... Listed under: [Other Projects](#)

717. [How to Make a Programmable Guitar Pedal With Arduino!](#)

This DIY Guitar Pedal project is for guitarists, hackers, and programmers that want to learn about digital signal processing, effects, synthesizers, and experiment without deep knowledge of DSP, electronics, or hardcore

programming. pedalSHIELD UNO is a lo-fi, programmable guitar pedal that works with the Arduino…… Listed under:

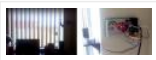718. ESP8266 Tutorial: How to Control Anything From the Internet!

In this ESP8266 tutorial, we are using an ESP-01 module to control an LED over the internet. The ESP8266 is a very cheap yet really effective platform for communicating over the internet. It is also easy to use with an Arduino. After going through this ESP8266 tutorial,…… Listed under: Other Projects

719. DIY Arduino Tutorial: How to Automate a Lamp for Ceremonial Inaugurations

"Knowledge removes ignorance, just as light removes darkness", as it is wisely said. In India, the ancient tradition of lighting oil lamps has a special significance. Almost all auspicious ceremonies are commenced by lighting a lamp. Hence came the idea to merge our traditional culture…… Listed under: Other Projects

720. DIY Arduino Tutorial: How to Automate Your Curtains

This Arduino Curtain Automation project will let you automate your curtain blinds using just an Arduino and a stepper motor. I just moved to America pursuing my higher studies. Because my dorm is very dark, I wanted to brighten up my room when I wanted…… Listed under: Other Projects

721. Arduino Servo Catapult: DIY Catapult using Arduino

Use an Arduino and a servo to shoot food to your cat! (Also works with other animals). Check out the video below to see how this Arduino Servo Catapult works. While maybe not the most practical application, this project will teach you the basics of servo motors…… Listed under: Other Projects

722. DIY Soil Testing with Arduino and FC-28 Moisture Sensor

In this article, we are going to interface an FC-28 Soil moisture sensor with an Arduino. This sensor measures the volumetric content of water in soil and gives us the moisture level. The sensor gives us both analog and digital output, so it can be used…… Listed under: Sensor – Transducer – Detector Projects

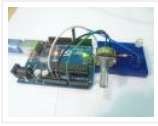723. Arduino Wheelchair Project: Motorized Controller Mount

This was an Arduino wheelchair project we developed for Principles and Practices of Assistive Technology (PPAT) in Fall 2016 at MIT. We made an Arduino-based motorized wheelchair controller mount for our client, Lisa. She lives at the Boston Home, a center for people with progressive…… Listed under: Motor Projects

724. LazyMax 1000: Arduino Phototransistor and Haptics Project

The idea for this Arduino phototransistor project came to me based on an idea that was shared by one of my friends at the FabLab. He talked about how his lab only has stools for people to sit on. Being very uncomfortable, the person succumbs…… Listed under: Other Projects

725. Arduino and Processing IDE Communication Tutorial

In this tutorial, we will make the communication between the Arduino and Processing. We will make the communication in both the ways, from the Arduino to Processing and from Processing to the Arduino. We will change the color of the serial window in the Processing...... Listed under: [Other Projects](#)

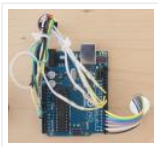726. [How to Make an Arduino Temperature Data Logger](#)

In this project, we are going to make an Arduino Temperature logger that will get the temperature value from the LM35 temperature sensor and the time from the DS3231 Real Time Clock module. Then we will store these values in the SD card file using...... Listed under: [Temperature Measurement Projects](#)

727. [Revive Old Drive-In Speakers with a Modern LED Twist](#)

When I was a kid we went to the drive-in theater to see movies like The Legend of Boggy Creek and Evel Knievel. I loved those movies but I remember just as vividly those retro-cool metal speakers that entered into our car for these campy...... Listed under: [LED Projects](#)

728. [Build a Simple Cocktail Drinkbot with Arduino](#)

Big parties need a conversation piece, and what's better than a drink-making robot? Not only is it a good conversation starter, it also frees up the party host who would normally be the bartender. It turned out that the drink robot was a really good idea. The...... Listed under: [Other Projects](#)

729. [A Simple Arduino LCD Min/Max Thermometer](#)

As a simple first Arduino experiment I interfaced a two line LCD (a Displaytech 162B) and an LM35DZ to make a simple Min/Max thermometer. Step 1 – Interfacing the Temperature Sensor This is really very simple. The LM35DZ has three pins, +5V, ground and a...... Listed under: [LCD Projects](#)

730. [Digital Door Lock using Arduino](#)

As thefts are increasing day by day security is becoming a major concern nowadays. In this project we will make a digital door lock system with keypad using Arduino Uno. It will open your door only when the right password is entered and it will start...... Listed under: [Other Projects](#)

731. [Home Automation using Arduino and ESP8266 Module](#)

In this project we are going to make a home automation system using ESP8266 WiFi module and Arduino Uno. Using this we will be able to control lights, electric fan and other home appliances through a web browser using your PC or mobile. These AC...... Listed under: [Home Automation Projects](#)

732. [IoT Data Logger using Arduino and ESP8266](#)

Today we are going to make an IoT WiFi data logger using Arduino, ESP8266 WiFi module and DHT22 temperature humidity sensor. Arduino is reading temperature and humidity sensed by DHT22 and sending it to an internet server using the ESP8266 WiFi module. Here we are using ThingSpeak as...... Listed under: [Other Projects](#)

733. [Arduino Weather Station Web Server](#)

In this tutorial we are going to make a weather station that will tell us temperature, humidity and heat index of a particular location. It will show these values in a web browser. You can monitor these data by entering the IP address in a mobile, computer or…… Listed under: [Sensor – Transducer – Detector Projects](#)

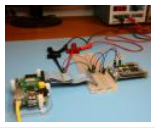734. [Temperature Controlled Fan using Arduino](#)

Here we are going to make a temperature controlled DC fan. DHT22 sensor is used to sense the room temperature and then we adjust speed of a DC fan/motor accordingly using PWM (Pulse Width Modulation). Arduino Uno is the heart of this project and a L293D…… Listed under: [Other Projects](#)

735. [Simple Android Bluetooth Application with Arduino Example](#)

This article will detail how to make a simple bluetooth application using Android Studio and demo it using an Arduino to toggle an LED and send data back-and-forth. No prior knowledge of Android development is needed, however it will help to know some basics of…… Listed under: [Arduino Android](#)

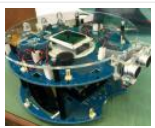736. [Arduino DC-DC Boost Converter Design Circuit with Control Loop](#)

This post will cover how to use an Arduino Uno to easily control a 10W+ boost converter. A discrete boost converter can be built by using just a few parts, namely an inductor, capacitor, diode, and a FET. Please see the Wikipedia page for how…… Listed under: [Other Projects](#)

737. [Arduino Line Tracking Robot Car](#)

This line tracking robot car was built base on the prototype mentioned in the previous knowledge item. You can find the details for the prototype: http://www.rs-online.com/designspark/electronics/eng/knowledge-item/arduino-line-tracking-robot-car-prototype Bills of Materials: PCB   Geared Motor OSRAM Opto Semiconductors Photodiode (RS stock number: 654-8902) Nichia LED (RS stock number: 713-3996)…… Listed under: [Robotics – Automation Projects](#)

738. [Johnny 6 is alive!](#)

Designing a custom plate for the Arduino Robot, adding jumbo LEDs and displaying readings from an ultrasonic distance sensor to the LCD. My previous post on the Arduino Robot described how I took the Runaway Robot sketch and modified it work with the PING ultrasonic…… Listed under: [LED Projects](#)

739. [The Evolution of a Light Theremin](#)

I started out a little over two years ago on work experience, before going on to become a trainee engineer, having decided that I would like to pursue a career in electronic engineering. At work I get to do a wide variety of things, such…… Listed under: [Other Projects](#)

740. [Developing your own Flowcode 7 controlled weather station](#)

This project details a Flowcode and E-blocks based weather station capable of reading local temperature and humidity with 2 remote thermo-hygrometer sensors. The local board also incorporates a real time clock. This article has been contributed by Flowcode user John Crow. Flowcode can be downloaded…… Listed under: [Other Projects](#)

741. [Designing and building a coffee table](#)

For a number of years, my colleague Andrew has had an old IBM mainframe CPU kept in storage, waiting to be transformed into something new. Hailing from a long-lost era of computing (the system in which this module was used was the 4381, first announced...... Listed under: [Other Projects](#)

742. [Old Sole](#)

ld Sole interrupts normal youthful days to force young people to interact with their environment in a different way. If the young shoe-wearer takes significantly more steps than the elderly individual with the walker, the shoes light up and vibrate uncomfortably, reminding the young person...... Listed under: [Other Projects](#)

743. [Flip](#)

Flip Intro There is something kind of magical about swimming when you are a child. Do you remember growing up and watching your shadow as you swam in the pool, trying to mimic a perfect dolphin kick and imagining you were a mermaid rather than...... Listed under: [Other Projects](#)

744. [Connected coffee machine](#)

Quite a lot of coffee is consumed at work but real statistics are missing. For the coffee machines with a can it can be interesting to have a visualization with coffee left in can, water in machine, time left until machine is finished, estimated time...... Listed under: [CNC Machines Projects](#)

745. [Wireless Motor Speed Control System with Arduino](#)

ICStation team introduce you the NRF24L01 Wireless Motor Speed Control System.This system works under DC 5V voltage. It uses the NRF24L01 Wireless Module to transmit speed control data and the Hall Sensor to detect the real rotate speed. This design uses the PWM duty cycle...... Listed under: [Motor Projects](#)

746. [Dish Shamer](#)

Project Description DishShamer solves the age-old problem of getting your roommates to wash their dishes. The kitchen is a communal space. When one individual fails to keep this shared environment clean, there can be two outcomes: conflict and socially awkward confrontations, or placing unfair cleaning burdens...... Listed under: [Other Projects](#)

747. [Chatty Coasters](#)

Chatty Coasters are interactive coasters that listen for silences and insert provocative conversation starters into them. Chatty Coasters are interactive drink holders that listen for silences in conversation and insert provocative questions into them. In order to encourage healthy, thought-provoking conversation in kitchens, Chatty Coaster waits...... Listed under: [Other Projects](#)

748. [A Smart Shop Window Experiment with Arduino](#)

Smart Shop Window A SmartLiving Experiment where using a QR code to control a light in a shop window. For this experiment we use a Grove LED (representing the shop's light) and a Smart phone to access the control switch. It's an ideal starter project...... Listed under:

[LED Projects](#)

749. [Track and Control Your Car Remotely](#)

Actually, many of us may suffer or afraid from being his car stolen. In this project, I will try to help you to protect your cars and even control them remotely. Basically, you have to leave a mobile phone in your car and when the…… Listed under: [Car Projects](#)

750. [Build a smart "Clapper" with SmartThings and Arduino](#)

When my colleague @thegibertchan first set up his homemade "Clapper" in our office, I knew immediately that I had to learn how it was made. The way it works is simple. A small microphone listens to two claps (within four seconds of each other) and…… Listed under: [Other Projects](#)

751. [Arduino Phone](#)

Combining Arduino and other shield modules, we make a mobile phone named Arduino Phone. Meanwhile, we printed a shell for it with a 3D printer. Though not as fine as you think, even a little bit clunky, it is still very cool: that is the…… Listed under: [Phone Projects](#)

752. [DIY Temperature & Humidity & Smoke Detector Alarm System](#)

The working voltage of this system is DC5V. It can measure the current temperature, humidity and smoke. It can display real-time data by the 1602 LCD and can realize the sound and light alarm when in the dangerous temperature and humidity. It is a simply…… Listed under: [How To – DIY – Projects](#)

753. [Fast Counter](#)

Every once in a while there is a question in the Arduino forum on how fast you can toggle an IO pin. The answer to this question depends on your line of thinking / what you will allow as an answer. So here is my…… Listed under: [Clock – Timer Projects](#)

754. [Control a Parrot AR Drone with Linino](#)

Performing the control of the AR.Drone with the iOS or Android apps is really difficult. The controls are very unstable because the app virtual joystick hasn't a good sensitivity response. The idea was to use a real joystick instead of the Parrot application itself: So,…… Listed under: [Drone](#)

755. [Universal Remote Control](#)

The transmitter in the remote control handset sends out a stream of pulses of infrared light when the user presses a button on the handset. A transmitter is often a light emitting diode (LED) which is built into the pointing end of the remote control…… Listed under: [Other Projects](#)

756. [Arduino / Raspberry Pi Internet Radio](#)

This is a project for Arduino and Raspberry Pi to make an Internet Radio, aimed at intermediate skill level. Some familiarity with Linux usage will be beneficial (or access to someone who can help out if required). Raspberry Pi runs mpd music player daemon to…… Listed under: [Other Projects](#)

757. [Just Veggin with an Arduino Beetbox](#)

Bring Touch Control to the Arduino. Use interesting touch sensors like Carrots or Beets to make a "Beetbox". In this project you will learn: * How to use the Cap Sense library to make Arduino responsive to touch * How adding a Wave Shield (and…… Listed under: [Other Projects](#)

758. [Useless Box](#)

Story Fascinated by this humorous anthropomorphic idea on instructables that left me philosophizing deeply about the essence of art, I decided to make this a project after witnessing many ruthless battles between human and robot on youtube.   How does it work? The Arduino "listens"…… Listed under: [Other Projects](#)

759. [Psychic Arduino](#)

If life has been too serious for you lately, this weekend project will take some of the stress out of your life and create a really neat toy in the process; a delight for a child or for those children who gather around your desk…… Listed under: [Arduino Android](#)

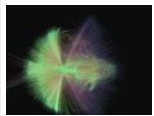760. [Provocation: Urban Encounters](#)

Description Urban Encounters is our imagination of the future of interactive surfaces within our 5x5x5 site. The crosswalk "island" we chose at the corner of Shattuck and Center in downtown Berkeley promotes an interesting combination of isolation, stuck-ness and loneliness. To bring out these themes into the physical world,…… Listed under: [Other Projects](#)

761. [Kroebe Lights](#)

Brainstorming Process After selecting Kroeber Fountain as our location of interest, we began to notice that it was a place at which people would congregate without interacting with one another. The fountain's shape – most notably, its tiered steps – affords it the ability to…… Listed under: [Other Projects](#)
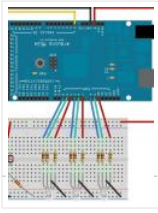
762. [Paper Instruments](#)

What are the paper instruments made of? Using Conductive Paint, we were able to create a paper piano & guitar that plays notes and changes graphics on a screen. Paper Piano Arduino Code Step by step – Paper Instrument Development Software needed Processing: https://processing.org/ Capacitive Arduino…… Listed under: [Other Projects](#)

763. [Zeitfluss – Flow of Time](#)

About this project Reasoning about time by printing onto the surface of a river Maybe you know situations when time's running up. In German there is a metaphor for that and translated it would be something like "time trickles away". Having this saying in mind…… Listed under: [Clock – Timer Projects](#)

764. [Raspberry Pi teams up with an Arduino](#)

The principal behind ArduinoPi First a little clarification, the ArduinoPi isn't really a library or a command set or an out of the box controller, its more a proof of concept using already know programming languages. If you want to use it be ready for…… Listed under: [Other Projects](#)

765. [Cracking an electronic safe using brute force](#)

Preface There's nothing nefarious here, nor is the information contained herein particularly helpful to thieves or the dishonest. A thief would just cut the dang thing open and be done with it. The story So I bought a fire safe to protect some documents that…… Listed under: [Security – Safety Projects](#)

766. [Drawing with a Laser – Hack-a-Day Logo](#)

Reading Hack a Day I found an interesting challenge: drawing their logo somewhere. And the fact that was even more interesting: "preference will be given to the largest and smallest submissions". I started figuring out how to do something like that with the things I had around, and…… Listed under: [Other Projects](#)

767. [Arduino Astronomical Clock](#)

This product allows you to set separate turn-on and turn-off times and those repeat every day. The disadvantage of this product is that, as the seasons change, you need to constantly adjust the turn-on and turn-off times. As illustrated in Figure 1, the variation over…… Listed under: [Clock – Timer Projects](#)

768. [Bike Across the Country While in Your Basement](#)

About this project This is a very simple and easy-to-build project that provides a sensor on the pedal crank of any exercise bike and generates keyboard output triggering Google Maps Street View to advance via the up arrow key. In my design, you pedal the crank five…… Listed under: [Car Projects](#)

769. [deCart](#)

Description deCart is an attachment to a shopping cart that uses social pressure to make the shopping a more productive, connected experience for society as a whole. List of Materials Although the entire premise of the project is simple, the implementation, however, is not and…… Listed under: [Other Projects](#)

770. [Arduino Weight Measurement using Load Cell and HX711 Module](#)

Today we are going to Measure the Weight by interfacing Load Cell and HX711 Weight Sensor with Arduino. We have seen weight machines at many shops, where machine displays the weight just by placing any item on the weighing platform. So here we are building…… Listed under: [Metering – Instrument Projects](#)

771. [Arduino Based Distance Measurement using Ultrasonic Sensor](#)

Ultrasonic sensors are great tools to measure distance without actual contact and used at several places like water level measurement, distance measurement etc. This is an efficient way to measure small distances precisely. In this project we have used an Ultrasonic Sensor to determine the distance of an obstacle from…… Listed under: [Sensor – Transducer – Detector Projects](#)

772. [LPG Leakage Detector using Arduino](#)

While LPG is an essential need of every household, its leakage could lead to a disaster. To alert on LPG leakage and prevent any mishappening there are various products to detect the leakage. Here we have developed an Arduino based LPG gas detector alarm. If gas...... Listed under: [Other Projects](#)

773. [Line Follower Robot using Arduino](#)

Line follower Robot is a machine which follows a line, either a black line or white line. Basically there are two types of line follower robots: one is black line follower which follows black line and second is white line follower which follows white line. Line...... Listed under: [Robotics – Automation Projects](#)

774. [Live Temperature and Humidity Monitoring over Internet using Arduino and ThingSpeak](#)

Humidity and Temperature are very common parameters for measuring at many places like farm, green house, medical, industries home and offices. We have already covered Humidity and Temperature Measurement using Arduino and displayed the data on LCD. In this IoT project we are going to...... Listed under: [Temperature Measurement Projects](#)

775. [Arduino Based Digital Thermometer](#)

Thermometers are useful apparatus being used since long time for temperature measurement. In this project we have made an Arduino based digital thermometer to display the current ambient temperature and temperature changes on a LCD unit in real time . It can be deployed in houses, offices, industries etc....... Listed under: [Metering – Instrument Projects](#)

776. [Frequency Counter using Arduino](#)

Almost every electronic hobbyist must have faced a scenario where he or she must measure the frequency of signal generated by a clock or a counter or a timer. We can use oscilloscope to do the job, but not all of us can afford an...... Listed under: [Calculator Projects](#)

777. [Interfacing Arduino with Raspberry Pi using Serial Communication](#)

Raspberry Pi and Arduino are the two most popular open source boards in Electronics Community. They are not only popular among Electronics Engineers but also among school students and hobbyists, because of their Easiness and Simplicity. Even some people just started liking Electronics because of Raspberry...... Listed under: [Other Projects](#)

778. [Interfacing TFT LCD with Arduino](#)

Today, we are going to Interface 2.4 inch TFT LCD Shield with Arduino. By using this color TFT LCD shield we can show characters, strings, blocks, images etc on the color TFT LCD. And we can use this TFT Shield in many applications like: Security...... Listed under: [LCD Projects](#)

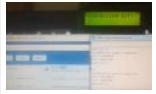779. [How to Send Data from Arduino to Webpage using WiFi](#)

Wireless communication between Electronic devices and modules is very important, to make them 'Fit' in the World of Internet of Things. HTTP protocol and HTML language have made it possible to transfer the Data anywhere in the world, over the web. We have already covered…… Listed under: [Other Projects](#)

780. [Controlling RGB LED using Arduino and Wi-Fi](#)

In last tutorial, we explained controlling a Robot using Wi-Fi and Arduino, and in this article we are with our next IOT Based Project- RGB LED Flasher using Wi-Fi. Here we have used Arduino and ESP8266 Wi-Fi Module to control the colors of RGB LED, through a Android…… Listed under: [LED Projects](#)

781. [Sending Email using Arduino and ESP8266 WiFi Module](#)

We are moving towards the World of Internet of Things (IoT). This technology plays a very important role in the Electronics and Embedded system. Sending an Email from any Microcontroller or Embedded system is very basic thing, which is required in IoT. So in this article,…… Listed under: [Other Projects](#)

782. [Wireless Notice Board using GSM and Arduino](#)

Wireless notice board is very selective term for this project, as it has a very wide scope rather than just being a simple notice board. First we should understand the purpose of this project, in this system we can display a message or notice to…… Listed under: [Other Projects](#)

783. [Pressure Sensor BMP180 Interfacing with Arduino Uno](#)

In this tutorial we are going to design a Barometric Pressure Measuring System using BMP180 and ARDUINO. First of all for interfacing BMP180 to ARDUINO, we need to download a library specifically designed for BMP180. This library is available at: https://github.com/adafruit/Adafruit-BMP085-Library After attaching that library, we…… Listed under: [Sensor – Transducer – Detector Projects](#)

784. [How to Use ADC in Arduino Uno?](#)

In this tutorial we are introducing concept of ADC (Analog to Digital Conversion) in ARDUINO UNO. Arduino board has six ADC channels, as show in figure below. Among those any one or all of them can be used as inputs for analog voltage. The Arduino Uno…… Listed under: [Other Projects](#)

785. [Arduino-based Ultrasonic Radar System via IOT](#)

Abstract RADAR is an object-detection system which uses radio waves to determine the range, altitude, direction, or speed of objects. Radar systems come in a variety of sizes and have different performance specifications. Some radar systems are used for air-traffic control at airports, and others…… Listed under: [Medical – Health based Projects](#)

786. [Arduino 101 Curie iOS Pulse Sensor](#)

I want use the Genuino 101 by Intel and Arduino for a project that regards health, but I want to use all the characteristics of the Arduino 101. One of most important characteristics of this board, I think, is the BLE connection. Then I want…… Listed under: [Sensor – Transducer – Detector Projects](#)

787. [arduino bluetooth vehicle](#)

Before I even began to think about how my final chassis was going to look like I became obsessed with the idea of eliminating all of the useless space that plagued my previous designs. I wanted to reduced the car to its most essential components....... Listed under: [Car Projects](#)

788. [Control Door Lock Remotely Using Smartphone](#)

Introduction Hi, friends. I came to this idea of controlling a door latch/lock remotely using a smartphone when I saw many people many times forget to carry latch/lock keys when they leave the house for a short trip, or the door gets latched accidentally while...... Listed under: [Security – Safety Projects](#)

789. [Quizmo](#)

This project is related to developing a handy gadget to help kids practice basic arithmetic operations. I decided to make it as my kids were very lazy to look into the books and come back very soon saying that they have done it (specially multiplication...... Listed under: [Calculator Projects](#)

790. [Plan your Holiday with Smart Power Planner](#)

Introduction Holiday times! It's the time we get a vacation to have fun and be relaxed. Everyone loves to make their holiday, an unforgettable one. But there will always be somethings that can bother you and spoil the holiday fun. As an example, while you...... Listed under: [Wireless Projects](#)

791. [Making of the Holiday Lantern](#)

Story I wanted to make a lantern that I can change its 'outfits' to different theme depending on the holiday seasons. So I make this lantern which I can change to paper covers and lighting of the lantern. A easy one would be just reuse...... Listed under: [Other Projects](#)

792. [Arduino HackHD Time-Lapse Dolly](#)

Story This project was inspired by someone else who made an Arduino time-lapse dolly (suprise surprise). However that project was published some years back and I have lost the link to it. Of course time-lapse is not that exciting anymore but 5 years ago it...... Listed under: [Clock – Timer Projects](#)

793. [IoT Controlled Snow Machine](#)

The most homemade snow machine you've ever seen. Made from a hairdryer, polystyrene and MKR1000. Controllable from anywhere in the world* Things used in this project Hardware components Arduino MKR1000 × 1 USB-A to Micro-USB Cable × 1 Apple USB Powe Adapter × 1 Jumper...... Listed under: [Other Projects](#), [Projects](#)

794. [Grill & Deck-Door Monitor](#)

Story We use our barbecue grill and our deck frequently. After once leaving the grill on all night, I wanted an easy way to check to make sure the grill is off before going to bed. This is especially important since our grill is tapped...... Listed under: [Other Projects](#)

795. [Give Your BLEBot a New Name](#)

At the Hackster Hardware Meetup Seattle, we had a bunch of BLE Bot 9000 robots. The problem was that all of the bots exposed the same services and names, so you can't choose the robot you want to control. The solution to controlling your bot...... Listed under: [Other Projects](#)

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796. [Tertiarm – 3d Printed Robot Arm](#)

This is first version of my low cost 3d printed robot arm. It is based on Ikea Tertial lamp. I choose it because it has very good kinematic with using springs to unload servos. So you can use different number of springs to achive diffrent...... Listed under: [Robotics – Automation Projects](#)

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797. [Knock To Open Treasure Chest](#)

Preface My daughter asked me to build her a treasure chest that she could use to store her most valuable things. Obviously she demanded it to have some kind of a locking mechanism so only she could open the box. First thought was to use...... Listed under: [Security – Safety Projects](#)

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798. [Arduino Bluetooth-controlled Mini-Lift](#)

Story We love our workshop, but it has one downside (or maybe upside) – a large flight of stairs to the gallery. We constantly need to move parts and components between one floor and the other, so we've been plotting different ideas: drones, dogs, carrier...... Listed under: [Other Projects](#)

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799. [Voice-Controlled Robot](#)

Story Voice-controlled Robot Voice-controlled robot is both hardware and cloud solution in one piece. The main components are: 1. Alexa Skill – to interpret voice commands and translate them to Google Cloud Messaging messages – deployed to Heroku cloud 2. Android application – to receive...... Listed under: [Robotics – Automation Projects](#)

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800. [Humidity Display of Date, Time and Temperature](#)

Story Have you ever wanted to make your own interface that can display the time, date, along with the temperature and the humidity? Well it's a lot easier than you'd think. A few important components are needed, as shown below. Arduino Uno/Nano Firstly we will...... Listed under: [Temperature Measurement Projects](#)

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