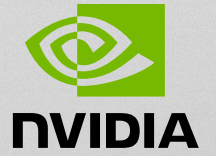


Catalog



NVIDIA Training Course Catalog

August 2024



Introduction

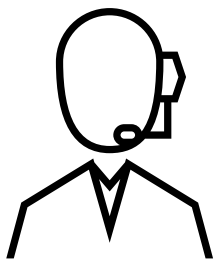
NVIDIA offers training for diverse needs, giving individuals and teams across organizations what they need to advance their knowledge in AI, accelerated computing, data science, data center administration, graphics and simulation, networking, and more.

With access to high-performance computing, you'll learn how to train, optimize, and deploy neural networks using the latest deep learning tools, frameworks, and SDKs. You'll also learn how to assess, parallelize, optimize, and deploy GPU-accelerated computing applications.

Our training program offers both self-paced online courses and instructor-led, prescheduled workshops. The self-paced courses range from 10 minutes to 8 hours and guide you through applying a specific technology, setting up a project, or administering solutions in a data center. Instructor-led workshops and boot camps go deeper into topic areas, teaching you how to implement a project or solution from end to end. Both types of courses give you valuable hands-on experience using the latest technologies.

Why Choose NVIDIA for Training?

- > Learn how to build deep learning and accelerated computing applications for industries such as healthcare, robotics, autonomous driving, manufacturing, and more.
- > Gain hands-on experience with the most widely used, industry-standard platforms including software, hardware, tools, and frameworks. Each student will have access to a fully configured, GPU-accelerated server in the cloud or access to NVIDIA solutions in our training lab.
- > Become proficient in administering NVIDIA hardware and software solutions such as DGX™, InfiniBand, Cumulus, NVIDIA AI Enterprise, and more.
- > Access instructor-led workshops and online courses from anywhere using just a laptop and internet connection.
- > Acquire real-world expertise through content designed in collaboration with industry leaders such as Children's Hospital of Los Angeles, Mayo Clinic, and PwC.
- > Earn NVIDIA certifications and course completion certificates to indicate subject matter competency and support your career growth.



For team training, contact an [NVIDIA training advisor](#), who will work with you to create a customized plan that addresses your team's specific training needs and is aligned to your business objectives and priorities.

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Instructor-Led Workshops for Developers

Workshop Name	Description	Prerequisites									
Accelerated Computing											
Accelerating CUDA® C++ Applications With Multiple GPUs	<p>Discover how to write CUDA C++ applications that efficiently and correctly use all available GPUs in a single node, dramatically improving the performance of applications and making the most cost-effective use of systems with multiple GPUs.</p> <p>> Learn More</p>	<p>Professional experience programming CUDA C/ C++ applications, including the use of the NVIDIA CUDA Compiler (NVCC), kernel launches, grid-stride loops, host-to-device and device-to-host memory transfers, and CUDA error handling. Familiarity with the Linux command line and experience using makefiles to compile C/C++ code.</p>									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
CUDA C++, NVCC, Nsight Systems	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes							
Fundamentals of Accelerated Computing With CUDA C/C++	<p>Learn how to accelerate and optimize existing C/ C++ CPU-only applications to apply the power of GPUs using the most essential CUDA techniques and the NVIDIA Nsight Systems profiler.</p> <p>> Learn More</p>	<p>Basic C/C++ competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of CUDA programming is assumed.</p>									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>NVIDIA Nsight Systems, nsys</td> <td>English, Korean, Japanese, Simplified Chinese, Traditional Chinese</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	NVIDIA Nsight Systems, nsys	English, Korean, Japanese, Simplified Chinese, Traditional Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
NVIDIA Nsight Systems, nsys	English, Korean, Japanese, Simplified Chinese, Traditional Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes							
Fundamentals of Accelerated Computing With CUDA Python	<p>Explore how to use Numba—the just-in-time, type-specializing Python function compiler—to create and launch CUDA kernels to accelerate Python programs on massively parallel NVIDIA GPUs.</p> <p>> Learn More</p>	<p>Basic Python competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. Also, must have NumPy competency, including the use of ndarrays and ufuncs.</p>									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
CUDA, Python, Numba, NumPy	English, Simplified Chinese, Traditional Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes							
Fundamentals of Accelerated Computing With OpenACC®	<p>Find out how to write and configure code parallelization with OpenACC, optimize memory movements between the CPU and GPU accelerator, and apply the techniques to accelerate a CPU-only Laplace heat equation to achieve performance gains.</p> <p>> Learn More</p>	<p>Basic C/C++ or Fortran competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of GPU programming is assumed.</p>									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
NVIDIA Nsight, OpenACC	English	8 hours	\$500 (excludes tax, if applicable)	Yes							

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Workshop Name	Description	Prerequisites									
Scaling CUDA C++ Applications to Multiple Nodes	Learn the tools and techniques needed to write CUDA C++ applications that can scale efficiently to clusters of NVIDIA GPUs. > Learn More	Intermediate experience writing CUDA C/C++ applications.									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>C++, CUDA, MPI, NVSHMEM</td> <td>English, Simplified Chinese</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	C++, CUDA, MPI, NVSHMEM	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
C++, CUDA, MPI, NVSHMEM	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes							
Data Science											
Accelerating Data Engineering Pipelines	Explore how to employ advanced data engineering tools and techniques with GPUs to significantly improve data engineering pipelines. > Learn More	Intermediate knowledge of Python (list comprehension, objects). Familiarity with pandas and introductory statistics (mean, median, mode) a plus.									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>pandas, cuDF, Dask, NVTabular, Plotly</td> <td>English</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	pandas, cuDF, Dask, NVTabular, Plotly	English	8 hours	\$500 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
pandas, cuDF, Dask, NVTabular, Plotly	English	8 hours	\$500 (excludes tax, if applicable)	Yes							
Enhancing Data Science Outcomes With Efficient Workflows	Learn how to create an end-to-end, hardware-accelerated machine learning pipeline for large datasets. Throughout the development process, you'll use diagnostic tools to identify delays and learn to mitigate common pitfalls. > Learn More	<ul style="list-style-type: none"> > Basic knowledge of a standard data science workflow on tabular data. > Knowledge of distributed computing using Dask. > Completion of the DLI's Fundamentals of Accelerated Data Science course or an ability to manipulate data using cuDF and some experience building machine learning models using cuML. 									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
Python, cuDF, Dask, Plotly, NVTabular, cuML, Forest Inference Library, PyTorch, and NVIDIA Triton™ Inference Server	English	8 hours	\$500 (excludes tax, if applicable)	Yes							
Fundamentals of Accelerated Data Science	Learn how to perform multiple analysis tasks on large datasets using NVIDIA RAPIDS™, a collection of data science libraries that allows end-to-end GPU acceleration for data science workflows. > Learn More	Professional data science experience with Python, including proficiency in pandas and NumPy. Also, must have familiarity with common machine learning algorithms, including XGBoost, linear regression, DBSCAN, K-Means, and SSSP.									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
RAPIDS, cuDF, XGBoost, cuML, cuGraph, Dask, cuPy, pandas, NumPy, Bokeh	English, Traditional Chinese, Japanese	8 hours	\$500 (excludes tax, if applicable)	Yes							

Workshop Name	Description	Prerequisites										
Deep Learning												
Applications of AI for Anomaly Detection	<p>Learn to detect anomalies in large datasets to identify network intrusions using supervised and unsupervised machine learning techniques, such as accelerated XGBoost, autoencoders, and generative adversarial networks (GANs).</p> <p>> Learn More</p>	Experience with convolutional neural networks (CNNs) and Python.										
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
RAPIDS, XGBoost, TensorFlow, Keras, pandas, autoencoders, GANs	English	8 hours	\$500 (excludes tax, if applicable)	Yes								
Applications of AI for Predictive Maintenance	<p>Discover how to identify anomalies and failures in time-series data, estimate the remaining useful life of the corresponding parts, and use this information to map anomalies to failure conditions.</p> <p>> Learn More</p>	Experience with Python and deep networks.										
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Python, TensorFlow, Keras, XGBoost, RAPIDS, cuDF, long short-term memory (LSTM), autoencoders	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes								
Building AI-Based Cybersecurity Pipelines	<p>Traditional cybersecurity methods include creating barriers around your infrastructure to protect it from intruders. However, as enterprises continue to digitally transform, they're faced with a proliferation of devices, more sophisticated cybersecurity attacks, and an incredibly vast network of data to protect—which means new cybersecurity methodologies must be explored. An alternative approach is to address cybersecurity as a data science problem: Better understand all the users and activities across your network so that you can identify which transactions are typical and which are potentially nefarious.</p> <p>The NVIDIA Morpheus AI framework lets cybersecurity developers and practitioners harness the power of GPU computing to implement cybersecurity solutions that perform on a scale never before possible. With Morpheus, cybersecurity developers can create optimized AI pipelines for filtering, processing, and classifying large volumes of real-time data. Bringing a new level of information security to data centers, Morpheus enables dynamic protection, real-time telemetry, and adaptive defenses for detecting and remediating cybersecurity threats.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Professional data science and/or data analysis experience. > Competency with the Python programming language. > Competency with the Linux command line. 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>NVIDIA Morpheus, NVIDIA Triton Inference Server, RAPIDS, CLX, Helm, Kubernetes</td> <td>English</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	NVIDIA Morpheus, NVIDIA Triton Inference Server, RAPIDS, CLX, Helm, Kubernetes	English	8 hours	\$500 (excludes tax, if applicable)	Yes	
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NVIDIA Morpheus, NVIDIA Triton Inference Server, RAPIDS, CLX, Helm, Kubernetes	English	8 hours	\$500 (excludes tax, if applicable)	Yes								

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Workshop Name	Description	Prerequisites												
Building Conversational AI Applications V2.0	<p>Discover how to quickly build and deploy production-quality speech AI applications with real-time transcription and natural language processing capabilities.</p> <p>> Learn More</p>	<p>Experience with Python coding and use of library functions and parameters. Also, a fundamental understanding of a deep learning framework, such as TensorFlow, PyTorch, or Keras, and a basic understanding of neural networks.</p>												
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate										
NVIDIA Riva, NVIDIA TAO Toolkit, Kubernetes	English	8 hours	\$500 (excludes tax, if applicable)	Yes										
Building Deep Learning-Based Anti-Fraud Applications (Chinese only)	<p>This course is primarily for data scientists and professionals working in the field of financial fraud modeling in banks. It teaches how to train, accelerate, and optimize fraud detection classifiers based on machine learning and deep learning.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Basic Python programming experience. > Fundamental understanding of deep learning frameworks (such as TensorFlow, PyTorch, or Keras). > Basic knowledge of neural networks. 												
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RAPIDS, CuPy, PyTorch, Deep Graph Library, NVIDIA NeMo™, NVIDIA Triton Inference Server	Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes										
Building Transformer-Based Natural Language Processing	<p>In this workshop, you'll learn how Transformers are used as the building blocks of modern large language models (LLMs). You'll then use these models for various NLP tasks, including text classification, named-entity recognition (NER), author attribution, and question answering. You'll also learn how to analyze various model features, constraints, and characteristics to determine which model is best suited for a particular use case based on metrics, domain specificity, and available resources.</p> <p>> Learn More</p>	<p>Experience with Python coding and use of library functions and parameters. Fundamental understanding of a deep learning framework, such as TensorFlow, PyTorch, or Keras. And basic understanding of neural networks.</p>												
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate										
PyTorch, pandas, NVIDIA NeMo, NVIDIA Triton Inference Server	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes										
Computer Vision for Industrial Inspection	<p>In this workshop, you'll learn how to quickly develop and deploy a machine learning model that uses deep learning for computer vision to perform defect classification and other visual recognition tasks. Using NVIDIA's own real production dataset as an example, this workshop illustrates how the solution can be easily applied to a variety of manufacturing and industrial inspection use cases.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Experience with Python; basic understanding of data processing and deep learning > To gain experience with Python, we suggest this Python tutorial > For a basic understanding of data processing and deep learning, we suggest Fundamentals of Deep Learning. 												
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>Python, pandas, DALI, NVIDIA TAO Toolkit, NVIDIA TensorRT™, and NVIDIA Triton Inference Server</td> <td>English, Simplified Chinese</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	Python, pandas, DALI, NVIDIA TAO Toolkit, NVIDIA TensorRT™, and NVIDIA Triton Inference Server	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes			
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate										
Python, pandas, DALI, NVIDIA TAO Toolkit, NVIDIA TensorRT™, and NVIDIA Triton Inference Server	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes										

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Workshop Name	Description	Prerequisites									
Data Parallelism: How to Train Deep Learning Models on Multiple GPUs	<p>This workshop teaches you techniques for data-parallel deep learning training on multiple GPUs to shorten the training time required for data-intensive applications. Working with deep learning tools, frameworks, and workflows to perform neural network training, you'll learn how to decrease model training time by distributing data to multiple GPUs, while retaining the accuracy of training on a single GPU.</p> <p>> Learn More</p>	<p>Experience with deep learning training using Python. See the Fundamentals of Deep Learning self-paced course here.</p>									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>PyTorch, PyTorch Distributed Data Parallel, NCCL</td> <td>English, Simplified Chinese</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	PyTorch, PyTorch Distributed Data Parallel, NCCL	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
PyTorch, PyTorch Distributed Data Parallel, NCCL	English, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes							
Getting Started With AI on NVIDIA® Jetson Nano™	<p>Build and train a classification dataset and model with NVIDIA Jetson Nano.</p> <p>> Learn More</p>	<p>Basic familiarity with Python</p>									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>PyTorch, NVIDIA Jetson Nano</td> <td>English</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	PyTorch, NVIDIA Jetson Nano	English	8 hours	\$500 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
PyTorch, NVIDIA Jetson Nano	English	8 hours	\$500 (excludes tax, if applicable)	Yes							
Fundamentals of Deep Learning	<p>Learn how deep learning works through hands-on exercises in computer vision and natural language processing (NLP). You'll train deep learning models from scratch and pick up tricks and tools for achieving highly accurate results along the way. You'll also learn to leverage freely available, state-of-the-art pretrained models to save time and get your deep learning application up and running quickly.</p> <p>> Learn More</p>	<p>An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays. Also, familiarity with pandas data structures and an understanding of how to compute a regression line.</p> <p>> Suggested materials to satisfy prerequisites: Python Beginner's Guide</p>									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>Tensorflow, Keras, pandas, NumPy</td> <td>English, Simplified Chinese, Japanese</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	Tensorflow, Keras, pandas, NumPy	English, Simplified Chinese, Japanese	8 hours	\$500 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
Tensorflow, Keras, pandas, NumPy	English, Simplified Chinese, Japanese	8 hours	\$500 (excludes tax, if applicable)	Yes							
Model Parallelism: Building and Deploying Large Neural Networks	<p>In this workshop, you'll learn how to scale training and deployment of LLMs and neural networks across multiple nodes, use various forms of model parallelism to overcome the challenges associated with large-model memory footprint, capture and understand training performance characteristics to optimize model architecture and deploy very large multi-GPU, multi-node models to production using NVIDIA Triton™ Inference Server.</p> <p>> Learn More</p>	<p>> Good understanding of PyTorch, deep learning, and data parallel training concepts</p> <p>> Practice with multi-GPU training and natural language processing is useful, but optional.</p>									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>PyTorch, Megatron-LM, DeepSpeed, Slurm, NVIDIA Triton Inference Server, NVIDIA Nsight</td> <td>English, Korean, Simplified Chinese</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	PyTorch, Megatron-LM, DeepSpeed, Slurm, NVIDIA Triton Inference Server, NVIDIA Nsight	English, Korean, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
PyTorch, Megatron-LM, DeepSpeed, Slurm, NVIDIA Triton Inference Server, NVIDIA Nsight	English, Korean, Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes							

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Workshop Name	Description	Prerequisites										
Generative AI and Large Language Models (LLMs)												
Building RAG Agents With LLMs	<p>Learn how to design retrieval-augmented generation (RAG) systems and bundle them into deliverable formats. Along the way, you'll learn advanced LLM composition techniques for internal reasoning, dialog management, and tooling.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Introductory deep learning, with comfort with PyTorch and transfer learning preferred. > Intermediate Python experience, including object-oriented programming and libraries. 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>Python, LangChain, NVIDIA AI Foundation endpoints, FAISS, Gradio, LangServe, FastAPI</td> <td>English</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	Python, LangChain, NVIDIA AI Foundation endpoints, FAISS, Gradio, LangServe, FastAPI	English	8 hours	\$500 (excludes tax, if applicable)	Yes	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
Python, LangChain, NVIDIA AI Foundation endpoints, FAISS, Gradio, LangServe, FastAPI	English	8 hours	\$500 (excludes tax, if applicable)	Yes								
Building Transformer-Based Natural Language Processing Application	<p>Learn how to apply and fine-tune a transformer-based deep learning model to natural language processing (NLP) tasks.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Experience with Python coding and use of library functions and parameters. > Fundamental understanding of a deep learning framework such as TensorFlow, PyTorch, or Keras. > Basic understanding of neural networks. 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>PyTorch, pandas, NVIDIA NeMo, NVIDIA Triton Inference Server</td> <td>English</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	PyTorch, pandas, NVIDIA NeMo, NVIDIA Triton Inference Server	English	8 hours	\$500 (excludes tax, if applicable)	Yes	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
PyTorch, pandas, NVIDIA NeMo, NVIDIA Triton Inference Server	English	8 hours	\$500 (excludes tax, if applicable)	Yes								
Efficient Large Language Model Customizations	<p>Learn a variety of techniques to efficiently customize pretrained LLMs for your specific use cases—without engaging in the computationally intensive and expensive process of pretraining your own model or fine-tuning a model's internal weights. Using the open-source NVIDIA NeMo framework, you'll learn prompt engineering and various parameter-efficient fine-tuning methods to customize LLM behavior for your organization.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Professional experience with the Python programming language. > Familiarity with fundamental deep learning topics like model architecture, training and inference. > Familiarity with a modern Python-based deep learning framework (PyTorch preferred). > Familiarity working with out-of-the-box pretrained LLMs. 										
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
Python, NVIDIA NeMo, GPT, LLaMA, HuggingFace	English	8 hours	\$500 (excludes tax, if applicable)	Yes								
Generative AI With Diffusion Models	<p>Get started with gen AI application development with this hands-on course where you'll learn how to build a text-to-image generative AI application using the latest techniques. Generate images with diffusion models and refine the output with various optimizations. Build a denoising diffusion model from the U-Net architecture to context embeddings for greater user control.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Good understanding of PyTorch > Good understanding of deep learning 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>PyTorch, CLIP</td> <td>English</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	PyTorch, CLIP	English	8 hours	\$500 (excludes tax, if applicable)	Yes	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
PyTorch, CLIP	English	8 hours	\$500 (excludes tax, if applicable)	Yes								

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Workshop Name	Description	Prerequisites										
Rapid Application Development Using Large Language Models	<p>In this course, you'll gain a strong understanding and practical knowledge of LLM application development by exploring the open-source ecosystem, including pretrained LLMs, that can help you get started quickly developing LLM-based applications.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Introductory deep learning, with comfort with PyTorch and transfer learning preferred. Content covered by DLI's Getting Started With Deep Learning or Fundamentals of Deep Learning courses, or similar experience is sufficient. > Intermediate Python experience, including object-oriented programming and libraries. Content covered by Python Tutorial (w3schools.com) or similar experience is sufficient. 										
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
Python, PyTorch, HuggingFace, transformers, LangChain, LlamaIndex	English	8 hours	\$500 (excludes tax, if applicable)	Yes								

Graphics and Simulation

Bootstrapping Computer Vision Models with Synthetic Data	<p>Learn how to use NVIDIA Omniverse Replicator, a core Omniverse extension, to accelerate the development of computer vision models. Generate accurate, photorealistic, physics-conforming synthetic data to ease the expensive, time-consuming task of labeling real-world data. Omniverse Replicator accelerates AI development at scale and reduces time to production.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Intermediate understanding of Python (including classes, objects, and decorators). > Basic understanding of Machine Learning and Deep Learning concepts and pipelines. 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>Omniverse Replicator, Omniverse Defect Extension</td> <td>English</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	Omniverse Replicator, Omniverse Defect Extension	English	8 hours	\$500 (excludes tax, if applicable)	Yes	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
Omniverse Replicator, Omniverse Defect Extension	English	8 hours	\$500 (excludes tax, if applicable)	Yes								
Building Digital Avatar Pipelines With NVIDIA Omniverse Audio2Face and Riva (Chinese only)	<p>This course, from an end-to-end application development perspective, will provide you with detailed guidance on how to use NVIDIA Omniverse Audio2Face and the interactive speech suite Riva to build virtual digital humans.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Basic Python programming experience. > Fundamental understanding of deep neural networks. 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>NVIDIA Omniverse Audio2Face, NVIDIA Riva, PyTorch</td> <td>Simplified Chinese</td> <td>8 hours</td> <td>\$500 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	NVIDIA Omniverse Audio2Face, NVIDIA Riva, PyTorch	Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
NVIDIA Omniverse Audio2Face, NVIDIA Riva, PyTorch	Simplified Chinese	8 hours	\$500 (excludes tax, if applicable)	Yes								

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Online, Self-Paced Courses for Developers

Course Name	Description	Prerequisites			
Accelerated Computing Fundamentals					
Accelerating CUDA C++ Applications With Concurrent Streams	Discover how to improve performance for your CUDA C/C++ applications by overlapping memory transfers to and from the GPU with computations on the GPU. > Learn More	Professional experience programming CUDA C/C++ applications, including the use of the nvcc compiler, kernel launches, grid-stride loops, host-to-device and device-to-host memory transfers, and CUDA error handling; Experience using Makefiles to compile C/C++ code.			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
		English	4 hours	\$30 (excludes tax, if applicable)	Yes
An Even Easier Introduction to CUDA	Learn the basics of writing parallel CUDA kernels to run on NVIDIA GPUs. > Learn More	Competency writing applications in CUDA C/C++.			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	C/C++	English	1 hour	Free	N/A
Fundamentals of Accelerated Computing With CUDA Python	Explore how to use Numba—the just-in-time, type-specializing Python function compiler—to create and launch CUDA kernels to accelerate Python programs on massively parallel NVIDIA GPUs. > Learn More	Basic Python competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. Also, must have NumPy competency, including the use of ndarrays and ufuncs.			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	CUDA, Python, Numba, NumPy	English, Simplified Chinese, Traditional Chinese	8 hours	\$90 (excludes tax, if applicable)	Yes
Fundamentals of Accelerated Computing With OpenACC	Find out how to build and optimize accelerated heterogeneous applications on multiple GPU clusters using a combination of OpenACC, CUDA-aware MPI, and NVIDIA profiling tools. > Learn More	Basic experience with C/C++			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	OpenACC, C/C++	English	8 hours	\$90 (excludes tax, if applicable)	N/A
Getting Started With Accelerated Computing With CUDA C/C++	Discover how to accelerate and optimize existing C/C++ CPU-only applications to leverage the power of GPUs using the most essential CUDA techniques and the Nsight Systems profiler. > Learn More	Basic C/C++ competency, including familiarity with variable types, loops, conditional statements, functions, and array manipulations. No previous knowledge of CUDA programming is assumed.			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	C/C++, CUDA	English, Japanese, Korean, Simplified Chinese, Traditional Chinese	8 hours	\$90 (excludes tax, if applicable)	Yes

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Course Name	Description	Prerequisites			
GPU Acceleration With the C++ Standard Library	Learn to write simple, portable, parallel-first applications using only standard C++ language features that can be compiled without modification to take advantage of NVIDIA GPU-accelerated environments. > Learn More	Beginner-level experience with C++ 11. Comfort working with C++ lambdas and standard library algorithms .			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	C++ , NVIDIA HPC SDK	English	2 hours	\$30 (excludes tax, if applicable)	N/A
Optimizing CUDA Machine Learning Codes With NVIDIA Nsight™ Profiling Tools	NVIDIA Developer Tools are a collection of applications, spanning desktop and mobile targets, that enable developers to build, debug, profile, and develop class-leading and cutting-edge software using the latest visual computing hardware from NVIDIA. In this course, you'll learn the effective use of two powerful NVIDIA developer tools: Nsight Systems and Nsight Compute . Nsight Systems provide developers with a system-wide visualization of an application's performance. Developers can optimize bottlenecks to scale efficiently across any number or size of CPU and GPU—from large servers to the smallest systems on chip. Nsight Compute is an interactive kernel profiler for CUDA applications. It provides detailed performance metrics and API debugging via a user interface and command-line tool. By the time you complete this course, you'll be able to use Nsight Systems and Nsight Compute to analyze and optimize CUDA applications. Following best practices, you'll begin by using Nsight Systems to analyze overall application structure and explore parallelization opportunities before turning to Nsight Compute to analyze and optimize individual CUDA kernels. > Learn More	Familiarity with machine learning applications using CUDA. We suggest Fundamentals of Accelerated Computing with CUDA C/C++ .			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	NVIDIA Nsight Systems , NVIDIA Nsight Compute	English	2 hours	\$30 (excludes tax, if applicable)	N/A
Scaling GPU-Accelerated Applications With the C++ Standard Library	In this interactive, hands-on workshop, which is the followup to GPU Acceleration With the C++ Standard Library, you'll learn how to write scalable, GPU-accelerated, hybrid applications using C++ standard language features alongside MPI. > Learn More	Beginner-level experience with C++ 11; comfort working with C++ lambdas and standard library algorithms; experience developing C++/MPI hybrid applications that require inter-rank communication; comfort working with C++ concurrency primitives such as <code>std::thread</code> , <code>std::barrier</code> , and <code>andstd::thread</code> .			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	C++, NVIDIA HPC SDK, MPI	English	2 hours	\$30 (excludes tax, if applicable)	N/A
Scaling Workloads Across Multiple GPUs With CUDA C++	Learn how to build robust and efficient CUDA C++ applications that can take advantage of all available GPUs on a single node. > Learn More	Competency writing applications in CUDA C/C++.			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	C/C++, accelerated computing, CUDA	English	4 hours	\$30 (excludes tax, if applicable)	Yes

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Course Name	Description	Prerequisites										
Data Science												
Accelerate Data Science Workflows With Zero Code Changes	In this workshop, you'll learn to use RAPIDS to speed up your CPU-based data science workflows. > Learn More	Basic understanding of data processing and knowledge of a standard data science workflow on tabular data. Experience using common Python libraries for data analytics.										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>CUDA, MPI, NVSHMEM</td> <td>English, Simplified Chinese</td> <td>6 hours</td> <td>\$90 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	CUDA, MPI, NVSHMEM	English, Simplified Chinese	6 hours	\$90 (excludes tax, if applicable)	Yes	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
CUDA, MPI, NVSHMEM	English, Simplified Chinese	6 hours	\$90 (excludes tax, if applicable)	Yes								
Accelerating End-to-End Data Science Workflows	Explore how to perform multiple analysis tasks on large datasets using RAPIDS, a collection of data science libraries that allows end-to-end GPU acceleration for data science workflows. > Learn More	Experience with Python, ideally including pandas and NumPy.										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>RAPIDS, cuDF, cuML, cuGraph, Apache Arrow</td> <td>English, Simplified Chinese</td> <td>6 hours</td> <td>\$90 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	RAPIDS, cuDF, cuML, cuGraph, Apache Arrow	English, Simplified Chinese	6 hours	\$90 (excludes tax, if applicable)	Yes	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
RAPIDS, cuDF, cuML, cuGraph, Apache Arrow	English, Simplified Chinese	6 hours	\$90 (excludes tax, if applicable)	Yes								
RAPIDS Accelerator for Apache Spark	In this training lab, we'll walk through the RAPIDS Accelerator for Apache Spark, including running SQL queries on CPU and GPU in Spark and diving into the toolset that helps enable success. > Learn More	<ul style="list-style-type: none"> > Basic experience with Linux terminal commands. > Basic experience with Python > Basic experience with Spark, PySpark, or pandas 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>RAPIDS, Spark</td> <td>English</td> <td>2 hours</td> <td>\$30 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	RAPIDS, Spark	English	2 hours	\$30 (excludes tax, if applicable)	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
RAPIDS, Spark	English	2 hours	\$30 (excludes tax, if applicable)	N/A								
Deep Learning												
Building a Brain in 10 Minutes	This one-click notebook explores the biological and psychological inspirations for the world's first neural networks. > Learn More	An understanding of fundamental programming concepts in Python 3 such as functions, loops, dictionaries, and arrays.										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>English</td> <td>10 minutes</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	N/A	English	10 minutes	Free	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
N/A	English	10 minutes	Free	N/A								
Building Real-Time Video AI Applications	Gain the knowledge and skills needed to enable the real-time transformation of raw video data from widely deployed camera sensors into deep learning-based insights. > Learn More	Competency in the Python 3, programming language, some experience manipulating data using pandas DataFrames, and familiarity with deep networks (specifically variations of CNNs).										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>NVIDIA DeepStream, NVIDIA TAO Toolkit, and NVIDIA TensorRT</td> <td>English, Simplified Chinese</td> <td>8 hours</td> <td>\$90.00 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	NVIDIA DeepStream, NVIDIA TAO Toolkit, and NVIDIA TensorRT	English, Simplified Chinese	8 hours	\$90.00 (excludes tax, if applicable)	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate								
NVIDIA DeepStream, NVIDIA TAO Toolkit, and NVIDIA TensorRT	English, Simplified Chinese	8 hours	\$90.00 (excludes tax, if applicable)	N/A								

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Course Name	Description	Prerequisites				
Deploying a Model for Inference at Production Scale	Learn how to deploy your own machine learning models on a GPU server. > Learn More	Familiarity with at least one machine learning framework, such as PyTorch, TensorFlow, ONNX, or TensorRT.				
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	
	NVIDIA Triton	English	4 hours	\$30 (excludes tax, if applicable)	N/A	
Digital Fingerprinting With Morpheus	In this course, you'll get hands-on experience developing and deploying the NVIDIA digital fingerprinting AI workflow that enables 100% data visibility and drastically reduces the time to detect threats. You'll also hear from cybersecurity experts from a variety of institutions about how to use NVIDIA AI frameworks and tools to architect cybersecurity solutions. > Learn More	This tutorial doesn't have any prerequisites, but familiarity with defensive cybersecurity themes and the Linux command line are a plus.				
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	
	NVIDIA Morpheus AI framework , NVIDIA Triton Inference Server	English	1 hour	Free	N/A	
Disaster Risk Monitoring Using Satellite Imagery	Learn how to build and deploy a deep learning model to automate the detection of flood events using satellite imagery. This workflow can be applied to lower the cost, improve the efficiency, and significantly enhance the effectiveness of various natural disaster management use cases. > Learn More	<ul style="list-style-type: none"> > Competency in the Python 3 programming language. > Basic understanding of machine learning and deep learning concepts, specifically variations of convolutional neural networks (CNNs), and pipelines. > Interest in understanding how to manipulate satellite imagery using modern methods. 				
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	
	NVIDIA DALI®, the NVIDIA TAO Toolkit, NVIDIA TensorRT, NVIDIA Triton Inference Server	English, Simplified Chinese	10 hours	Free	Yes	
Exploring Adversarial Machine Learning	In this course, which is designed for both data scientists and security practitioners, you'll explore the security risks and vulnerabilities that adopting machine learning might expose you to. You'll also explore the latest techniques and tools being used by attackers and build some of your own attacks. > Learn More	<p>Intermediate experience with Python, ideally including PyTorch, pandas, and NumPy.</p> <p>Solid understanding of machine learning and deep learning concepts and technologies, as provided in DLI's Fundamentals of Deep Learning course.</p> <p>These prerequisites can be fulfilled with the self-paced Getting Started With Deep Learning course from DLI or other introductory Python-based machine learning training.</p>				
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	
	N/A	English	8 hours	\$90 (excludes tax, where applicable)	Yes	

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Course Name	Description	Prerequisites									
Get Started With Highly Accurate, Customer ASR for Speech AI	Learn to build, train, fine-tune, and deploy a GPU-accelerated automatic speech recognition service with NVIDIA Riva that includes customized features. > Learn More	Basic understanding of machine learning and deep learning concepts and pipelines. In addition, this lab requires that the user have an NVIDIA NGC account and API key. To fulfill this requirement, please: > Register and activate a free NGC account > Generate your NGC API key and save it in a safe location									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>Riva, TAO Toolkit, Kubernetes</td> <td>English</td> <td>3 hours</td> <td>Price \$30 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	Riva, TAO Toolkit, Kubernetes	English	3 hours	Price \$30 (excludes tax, if applicable)	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
Riva, TAO Toolkit, Kubernetes	English	3 hours	Price \$30 (excludes tax, if applicable)	N/A							
Getting Started With AI on Jetson Nano	Discover how to build a deep learning classification project with computer vision models using the NVIDIA Jetson Nano Developer Kit. > Learn More	Basic familiarity with Python (helpful, not required).									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>PyTorch, Jetson Nano</td> <td>English</td> <td>3 hours</td> <td>Price \$30 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	PyTorch, Jetson Nano	English	3 hours	Price \$30 (excludes tax, if applicable)	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
PyTorch, Jetson Nano	English	3 hours	Price \$30 (excludes tax, if applicable)	N/A							
Getting Started With Deep Learning	Explore the fundamentals of deep learning by training neural networks and using results to improve performance and capabilities. > Learn More	<ul style="list-style-type: none"> > An understanding of fundamental programming concepts in Python 3, such as functions, loops, dictionaries, and arrays. > Familiarity with pandas data structures and an understanding of how to compute a regression line > Suggested materials to satisfy prerequisites: Python Beginner's Guide 									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>TensorFlow 2 with Keras, pandas</td> <td>English, Simplified Chinese</td> <td>8 hours</td> <td>\$90 (excludes tax, if applicable)</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	TensorFlow 2 with Keras, pandas	English, Simplified Chinese	8 hours	\$90 (excludes tax, if applicable)	Yes
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
TensorFlow 2 with Keras, pandas	English, Simplified Chinese	8 hours	\$90 (excludes tax, if applicable)	Yes							
Getting Started With Image Segmentation	Learn how to categorize segments of an image. > Learn More	Basic experience training neural networks.									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>TensorFlow 2 with Keras</td> <td>English</td> <td>2 hours</td> <td>\$30 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	TensorFlow 2 with Keras	English	2 hours	\$30 (excludes tax, if applicable)	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
TensorFlow 2 with Keras	English	2 hours	\$30 (excludes tax, if applicable)	N/A							
Integrating Sensors With NVIDIA DRIVE	Find out how to integrate automotive sensors into your applications using NVIDIA DRIVE. > Learn More	Basic experience in C++ and Linux terminal commands.									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>C++, NVIDIA DriveWorks</td> <td>English</td> <td>2 hours</td> <td>\$30 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	C++, NVIDIA DriveWorks	English	2 hours	\$30 (excludes tax, if applicable)	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
C++, NVIDIA DriveWorks	English	2 hours	\$30 (excludes tax, if applicable)	N/A							

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Course Name	Description	Prerequisites			
Introduction to Graph Neural Networks	Learn the basic concepts, models, and applications of graph neural networks. > Learn More	Competency in the Python 3 programming language. Experience with deep neural networks (specifically variations of CNNs).			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	Deep Graph Library, PyTorch	English	2 hours	\$30 (excludes tax, if applicable)	N/A

Introduction to Physics-Informed Machine Learning With NVIDIA Modulus	High-fidelity simulations in science and engineering are computationally expensive and time-prohibitive for quick iterative use cases, from design analysis to optimization. NVIDIA Modulus, the physics machine learning platform, turbocharges such use cases by building physics-based deep learning models that are 100,000X faster than traditional methods and offer high-fidelity simulation results. Upon completion, you'll understand the various building blocks of Modulus and the basics of physics-informed deep learning. You'll also understand how the Modulus framework integrates with the overall Omniverse platform. > Learn More	<ul style="list-style-type: none"> > Familiarity with the Python programming language > An understanding of partial differential equations and their use in physics. > Familiarity with machine learning concepts like training and inference. 			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	NVIDIA Modulus	English	4 hours	\$30 (excludes tax, if applicable)	N/A

Generative AI and Large Language Models (LLMs)

Augment Your LLM Using Retrieval-Augmented Generation	Retrieval-augmented generation (RAG) is an end-to-end architecture that combines an information-retrieval component with a response generator. In this introductory course, we provide a starting point using components that NVIDIA uses internally. This workflow will jump-start you on your LLM and RAG journey. > Learn More	None			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	N/A	English	1 hour	Free	N/A

Building RAG Agents for LLMs	Agents powered by LLMs are quickly gaining popularity. An especially powerful recent development has been the popularization of retrieval-based LLM systems that can hold informed conversations by using tools, looking at documents, and planning their approaches. This course will observe how you can deploy an agent system in practice and scale up your system to meet the demands of users and customers. > Learn More	<ul style="list-style-type: none"> > Introductory deep learning knowledge, with comfort with PyTorch and transfer learning preferred. > Intermediate Python experience, including object-oriented programming and libraries. 			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
	N/A	English	8 hours	Free	Yes

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Course Name	Description	Prerequisites									
Deploying RAG Pipelines for Production at Scale	<p>This course focuses on teaching production-level deployment of LLM applications, especially enterprise-grade deployment of RAG pipelines. It covers various aspects for an end-to-end deployment using Helm charts and NVIDIA NIM™ microservices.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Familiarity working with LLM-based applications > Familiarity with RAG pipelines > Familiarity working with Kubernetes > Familiarity working with Helm 									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
NVIDIA NIMs	English	3 hours	\$30 (excludes tax, if applicable)	N/A							
Generative AI Explained	<p>Generative AI describes technologies that are used to generate new content based on a variety of inputs. In this course, you'll learn generative AI concepts, applications, as well as the challenges and opportunities in this exciting field.</p> <p>> Learn More</p>	<p>Basic understanding of machine learning and deep learning concepts</p>									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>English</td> <td>2 hours</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	N/A	English	2 hours	Free	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
N/A	English	2 hours	Free	N/A							
Generative AI With Diffusion Models	<p>In this workshop, you'll train deep learning models from scratch and learn tools and tricks to achieve highly accurate results. You'll also learn to leverage freely available, state-of-the-art pretrained models to save time and get your deep learning application up and running quickly.</p> <p>> Learn More</p>	<p>An understanding of fundamental programming concepts in Python such as functions, loops, dictionaries, and arrays.</p>									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
TensorFlow 2 with Keras, pandas	English	8 hours	\$90 (excludes tax, if applicable)	Yes							
Introduction to Transformer-Based Natural Language Processing	<p>In this course, you'll learn how transformers are used as the building blocks of modern large language models (LLMs). You'll then use these models for various NLP tasks, including text classification, named-entity recognition (NER), author attribution, and question answering.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Basic understanding of deep learning concepts. > Basic understanding of language modeling and transformers. 									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
NVIDIA NeMo	English	6 hours	\$30 (excludes tax, if applicable)	Yes							
Prompt Engineering With Llama 2	<p>In this course, you'll interact with and prompt engineer Llama 2 models to analyze documents, generate text, and be an AI assistant.</p> <p>> Learn More</p>	<p>Experience with deep learning training using Python.</p>									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>Llama 2, HuggingFace</td> <td>English</td> <td>3 hours</td> <td>\$30 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	Llama 2, HuggingFace	English	3 hours	\$30 (excludes tax, if applicable)	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
Llama 2, HuggingFace	English	3 hours	\$30 (excludes tax, if applicable)	N/A							

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Course Name	Description	Prerequisites				
Synthetic Tabular Data Generation Using Transformers	Synthetic data generation (SDG) is a data-augmentation technique necessary for increasing the robustness of models by supplying training data. In this course, you'll explore the use of transformers for synthetic tabular data generation. > Learn More	<ul style="list-style-type: none"> > Competency in the Python 3 programming language. > Basic understanding of machine learning and deep learning concepts and pipelines. > Experience building machine learning models with tabular data. > Basic understanding of language modeling and transformers. 				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
		NVIDIA NeMo	English	4 hours	\$30 (excludes tax, if applicable)	N/A
Techniques for Improving the Effectiveness of RAG Systems	Learn techniques that can take your RAG system from an interesting proof of concept to a serious asset. > Learn More	<ul style="list-style-type: none"> > Familiarity working with LLM-based applications > Familiarity with RAG pipelines 				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
		NVIDIA NIMs	English	3 hours	\$30 (excludes tax, if applicable)	N/A
Graphics and Simulation						
Assemble a Simple Robot in NVIDIA Isaac Sim™	In this course, you'll step through the "Assemble a Simple Robot" tutorial to rig a two-wheel mobile robot in a live NVIDIA Isaac Sim GPU environment. > Learn More	A Windows or Linux computer with the ability to install Omniverse Launcher and Omniverse applications; internet bandwidth sufficient to support the Isaac Sim client/server stream (performance will vary).				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
		NVIDIA Isaac Sim	English	30 minutes	Free	N/A
Build Beautiful, Custom UI for 3D Tools on NVIDIA Omniverse	Experience the NVIDIA Omniverse development platform for builders and creators of virtual worlds. Become a master in UI with a deep dive into NVIDIA Omniverse Kit's powerful omni.ui suite of tools and frameworks. In this self-paced course, you'll build your own custom UI for workflows in Omniverse with hands-on exercises. > Learn More	Basic familiarity with Python (helpful, not required). Suggested materials to satisfy prerequisites: The Python Tutorial.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
		Omniverse Code, Visual Studio Code, Python, and the Python Extension	English, Simplified Chinese	90 minutes	Free	N/A
Building a 3D Product Configurator With OpenUSD and Omniverse	In this hands-on lab, you'll unlock the power of OpenUSD to build a real-time configurator in NVIDIA Omniverse. Along the way, you'll learn about workflows, asset considerations, and USD composition concepts that you can apply directly to your own development process. > Learn More	Intermediate Python experience, including object-oriented programming and libraries.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate
		This lab requires a machine with an NVIDIA RTX GPU.	English	2 hours	Free	N/A

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Course Name	Description	Prerequisites									
Develop, Customize, and Publish in NVIDIA Omniverse With Extensions	<p>Want to change the functionality and user interface (UI) of NVIDIA Omniverse? Learn how to customize the Omniverse experience with extensions using Python code.</p> <p>> Learn More</p>	A basic understanding of Python. A basic understanding of computer graphics is useful but not required.									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>Omniverse Code, Visual Studio Code, Python, and the Python Extension</td> <td>English</td> <td>8 hours</td> <td>Free</td> <td>Yes</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	Omniverse Code, Visual Studio Code, Python, and the Python Extension	English	8 hours	Free	Yes
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
Omniverse Code, Visual Studio Code, Python, and the Python Extension	English	8 hours	Free	Yes							
Easily Develop Advanced 3D Layout Tools on NVIDIA Omniverse	<p>Get hands-on experience with NVIDIA Omniverse—the platform for connecting and creating physically accurate, 3D virtual worlds. See how easy it is to create your own custom scene layout tools in Omniverse Code with a few lines of Python script. In this self-paced course, you'll build your own custom scene layout in Omniverse with hands-on exercises in Omniverse Code and Python.</p> <p>> Learn More</p>	A basic understanding of computer graphics concepts—such as vertices, meshes, and RGB values—and an understanding of fundamental programming concepts in Python like functions, loops, dictionaries, and arrays.									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
Universal Scene Description	English, Simplified Chinese	2 hours	Free	N/A							
Essentials of Developing Omniverse Kit Applications	<p>In this course, participants will learn about kit files and how to create one, how to add extensions to applications, how to define the layout of an application and how to package and distribute an application.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > A basic understanding of Python > A basic understanding of computer graphics is useful but not required. > Creating an extension for Omniverse. > Using Github. > How to use terminal commands. 									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>NVIDIA NeMo</td> <td>English</td> <td>4 hours</td> <td>\$30 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	NVIDIA NeMo	English	4 hours	\$30 (excludes tax, if applicable)	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
NVIDIA NeMo	English	4 hours	\$30 (excludes tax, if applicable)	N/A							
Essentials of USD in NVIDIA Omniverse	<p>Universal Scene Description (OpenUSD) is transforming 3D data modeling across various industries and is poised to be the open standard that enables the 3D evolution of the internet—the metaverse. In this hands-on training, you'll learn about data modeling using Prims, attributes, relationships, and custom schemas and composition for scene assembly and collaboration. The hands-on portion of the training will utilize the USD Python API to experiment with the fundamental concepts of USD.</p> <p>> Learn More</p>	An understanding of fundamental programming concepts in Python 3 such as functions, loops, dictionaries, and arrays.									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>OpenUSD, Omniverse</td> <td>English</td> <td>2 hours</td> <td>\$30 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	OpenUSD, Omniverse	English	2 hours	\$30 (excludes tax, if applicable)	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
OpenUSD, Omniverse	English	2 hours	\$30 (excludes tax, if applicable)	N/A							

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Course Name	Description	Prerequisites			
Fundamentals of Working With OpenUSD	<p>In this lab, we'll cover the fundamentals of working with Universal Scene Description (OpenUSD). You'll learn how to use USD for nondestructive workflows, how layers can help with ease and speed of scene composition, and how to use USD for data separation and reuse it to accelerate 3D workflows in industrial use cases.</p> <p>> Learn More</p>	An understanding of fundamental programming concepts in Python 3 such as functions, loops, dictionaries, and arrays.			
		Tools, Libraries, Frameworks	Languages	Duration	Price
	This lab requires a machine with an NVIDIA RTX GPU.	English	2 hours	Free	N/A
Getting Started With USD for Collaborative 3D Workflows	<p>Learn how to generate a scene using human-readable Universal Scene Description ASCII (.USDA) files.</p> <p>Upon completion, you'll be able to create your own scenes within the USD framework and will have a strong foundation to use it in applications, such as NVIDIA Omniverse, Maya, Unity, and Unreal Engine.</p> <p>> Learn More</p>	A basic understanding of computer graphics concepts—such as vertices, meshes, and RGB values—and an understanding of fundamental programming concepts in Python like functions, loops, dictionaries, and arrays.			
		Tools, Libraries, Frameworks	Languages	Duration	Price
	Universal Scene Description	English, Simplified Chinese	2 hours	Free	N/A
How to Build a Native OpenUSD XR Application	<p>Learn how to take advantage of Universal Scene Description (OpenUSD) to accelerate your extended reality (XR) development and enhance visual fidelity like never before. This session will equip you with the skills and tools necessary to build, customize, and stream your own OpenUSD native XR applications using NVIDIA Omniverse and NVIDIA CloudXR..</p> <p>> Learn More</p>	Intermediate Python experience, including object-oriented programming and libraries.			
		Tools, Libraries, Frameworks	Languages	Duration	Price
	This course requires a VR headset and an NVIDIA RTX GPU.	English	2 hours	Free	N/A
How to Build Custom 3D Scene Manipulator Tools on NVIDIA Omniverse	<p>See how you can build advanced tools on the modular, easily extensible Omniverse platform. You'll learn from the Omniverse developer ecosystem team how you can extend and enhance the 3D tools you know and love today. In this self-paced course, you'll build your own custom scene manipulator tools in Omniverse with hands-on exercises writing a few lines of Python code.</p> <p>> Learn More</p>	Basic familiarity with Python (helpful, not required). Suggested material to satisfy prerequisites: The Python Tutorial .			
		Tools, Libraries, Frameworks	Languages	Duration	Price
	Omniverse Code, Visual Studio Code, Python, and the Python Extension	English, Simplified Chinese	90 minutes	Free	N/A

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Course Name	Description	Prerequisites									
How to Build OpenUSD Applications for Industrial Digital Twins	<p>This lab introduces the basics of the NVIDIA Omniverse development platform. You'll learn how to get started building 3D applications and tools that deliver the functionality needed to support industrial use cases and workflows for aggregating and reviewing large facilities such as factories, warehouses, and more.</p> <p>> Learn More</p>	Intermediate Python experience, including object-oriented programming and libraries.									
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
This lab requires a machine with an NVIDIA RTX GPU.	English	2 hours	Free	N/A							
Introduction to Robotic Simulations in NVIDIA Isaac Sim	<p>Robotic automation has enjoyed great success in recent years with increasing hardware capabilities driving innovation in simulation and machine learning. In this course, we introduce you to Isaac Sim, NVIDIA Omniverse's solution for simulation and robotics.</p> <p>You'll learn how to tap into the simulation loop of a 3D engine and initialize experiments with objects, robots, and physics logic. This can be done programmatically using Omniverse Kit and Pixar USD commands, but the course will use Isaac Sim Core to wrap these low-level operations in an object-oriented fashion. By the end of the course, you'll be able to simulate and control NVIDIA JetBot™ and Franka Emika robots and coordinate them together to perform a handoff.</p> <p>The skills covered in this course are direct prerequisites for working with Isaac Gym and create a good starting point for exploring Isaac Sim and other Omniverse applications. The course is great for those interested in 3D scene specification and robotic simulation, but it's also useful for researchers looking to expand their toolkits and seasoned developers interested in exploring design patterns for Omniverse Kit development.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Intermediate knowledge and general comfort with Python 3. This includes familiarity with functions, classes, and basic design patterns. > Comfort with NumPy arrays and basic matrix operations. > A Windows or Linux machine with NVIDIA Omniverse and the Omniverse Streaming Client app. 									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>Isaac Sim, Omniverse Kit, NumPy</td> <td>English, Simplified Chinese</td> <td>4 hours</td> <td>\$30 (excludes tax, if applicable)</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	Isaac Sim, Omniverse Kit, NumPy	English, Simplified Chinese	4 hours	\$30 (excludes tax, if applicable)	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
Isaac Sim, Omniverse Kit, NumPy	English, Simplified Chinese	4 hours	\$30 (excludes tax, if applicable)	N/A							
Synthetic Data Generation for Training Computer Vision Models	<p>How much data is enough? This is a common question when fine-tuning or training computer vision models. In cases where data collection is a limiting factor, we can use synthetic data! NVIDIA Omniverse Replicator streamlines synthetic data generation (SDG) using 3D assets into a single application, with the ability to modify the appearance and format of the data. This lab highlights one of the ways deep learning tools and Omniverse can be used together to streamline deep learning workloads.</p> <p>> Learn More</p>	<ul style="list-style-type: none"> > Intermediate understanding of Python (including classes, objects, and decorators): learn about this topic from the Python.org tutorials > Basic understanding of Machine Learning and Deep Learning concepts and pipelines: learn about this topic from the "Deep Learning Demystified" video 									
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>NVIDIA Omniverse Replicator, NVIDIA Triton Inference Server, PyTorch</td> <td>English</td> <td>3 hours</td> <td>\$30</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	NVIDIA Omniverse Replicator, NVIDIA Triton Inference Server, PyTorch	English	3 hours	\$30	N/A
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate							
NVIDIA Omniverse Replicator, NVIDIA Triton Inference Server, PyTorch	English	3 hours	\$30	N/A							

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Course Name	Description	Prerequisites													
Infrastructure															
AI Infrastructure and Operations Fundamentals	<p>Explore AI, GPU computing, NVIDIA AI software architectures, and how to implement and scale AI workloads in the enterprise data center.</p> <p>> Learn More</p>	No Prerequisites													
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>Artificial intelligence, machine learning, deep learning, GPU hardware and software</td> <td>English</td> <td>7 hours</td> <td>\$49 (excludes tax, if applicable)</td> <td>Available</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	Artificial intelligence, machine learning, deep learning, GPU hardware and software	English	7 hours	\$49 (excludes tax, if applicable)	Available				
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam											
Artificial intelligence, machine learning, deep learning, GPU hardware and software	English	7 hours	\$49 (excludes tax, if applicable)	Available											
Introduction to NVIDIA DOCA™ for DPUs	<p>The NVIDIA DOCA Software Framework lets developers rapidly create applications and services on top of NVIDIA BlueField data processing units (DPUs). Together, DOCA and the BlueField DPU deliver breakthrough networking, security, and storage performance with a comprehensive, open development platform.</p> <p>In this self-paced course, you'll learn the basic concepts of DOCA as a platform for accelerated data center computing on BlueField DPUs. Upon completion, participants will be equipped with introductory knowledge that will enable you to begin using DOCA and DPUs to develop applications that accelerate your data centers services.</p> <p>> Learn More</p>	<p>> Familiarity with software architecture and how it relates to and executes on hardware.</p> <p>> Suggested materials to satisfy prerequisite:</p> <ul style="list-style-type: none"> • Enterprise Data Center Networking • Data Center: Overview • Data Center: Virtualization <p>> Some working knowledge of data center networking.</p> <p>> Suggested materials to satisfy prerequisite:</p> <ul style="list-style-type: none"> • Introducing How Computers Work • Hardware Acceleration • Software Execution and Computing 													
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certificate</th> </tr> </thead> <tbody> <tr> <td>NVIDIA DOCA SDK</td> <td>English, Simplified Chinese</td> <td>2 hours</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate	NVIDIA DOCA SDK	English, Simplified Chinese	2 hours	Free	N/A				
Tools, Libraries, Frameworks	Languages	Duration	Price	Certificate											
NVIDIA DOCA SDK	English, Simplified Chinese	2 hours	Free	N/A											

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Instructor-Led Workshops for Administrators

Workshop Name	Description	Prerequisites				
AI and Data Science						
NVIDIA AI Enterprise Administration: Public Training	This hands-on training course explores architecture, installation, configuration, operation, and management of NVIDIA AI Enterprise. > Learn More	None.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		N/A	English	12 hours	\$1,500	N/A
Cluster Administration						
NVIDIA Base Command™ Manager	This course provides an overview of Base Command Manager, including managing nodes and software images, monitoring devices and jobs, managing users, and configuring workload managers. > Learn More	None.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		Base Command Manager	English	12 hours	Contact us	N/A
Ethernet Cumulus						
Cumulus® Linux: Public Bootcamp	Learn how to install, deploy, configure, and troubleshoot Cumulus-based networks. This course offers a perfect blend of hands-on training and theoretical education. > Learn More	None.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		Cumulus Linux switches	English	12 hours	\$1,500	Available
Cumulus Linux: Private Workshop	In this hands-on private training, you'll learn about NVIDIA Cumulus OS architecture, installation, configuration, operation, and management of Cumulus Linux running on NVIDIA switches. > Learn More	None.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		Cumulus Linux switches	English	20 hours	Contact us	Available
NVIDIA Cumulus Linux: Customized Advanced Training	This course focuses on how to build and operate a state-of-the-art data center or storage fabric with emphasis on troubleshooting. The course covers advanced topics such as filtering, quality of service (QoS), Ethernet VPN multihoming (EVPN-MH), monitoring, and active testing. > Learn More	None.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		Cumulus Linux switches	English	12 hours	Contact us	N/A

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Workshop Name	Description	Prerequisites				
InfiniBand						
InfiniBand Customized Course	In this course, you'll learn about InfiniBand architecture and how to manage, monitor, and troubleshoot your InfiniBand network. > Learn More	Network administrators and IT professionals that need to install, configure, manage, monitor, and troubleshoot the configuration and performance of InfiniBand networks.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		InfiniBand networks	English	16 hours	Contact us	Available
InfiniBand Professional Customized Training	In this course, you'll learn about InfiniBand and Cumulus architecture and how to manage, monitor, and troubleshoot triad deployment-based networks. > Learn More	None.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		InfiniBand networks	English	16 hours	Contact us	N/A
NVIDIA DGX						
NVIDIA DGX H200/H100/A100 Administration: Private Workshop	This course provides an overview of NVIDIA DGX systems, tools for in-band and out-of-band management, NGC, the basics of running workloads, and specific management tools and command-line interface (CLI) commands. In addition, this course includes content on Multi-Instance GPU (MIG), managing storage, performance validation, and other system management tools and concepts. > Learn More	System and network administrators and IT professionals that need to configure and verify the configuration and performance of DGX systems.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		DGX H200/H100/A100	English	16 hours	Contact us	N/A
NVIDIA DGX H200/H100/A100 Administration: Public Workshop	This course provides an overview of DGX systems and tools for in-band and out-of-band management, the basics of running workloads, specific management tools, and CLI commands. > Learn More	System and network administrators and IT professionals that need to configure and verify the configuration and performance of DGX systems.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		DGX H200/H100/A100	English	16 hours	\$1,500	N/A

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Workshop Name	Description	Prerequisites				
NVIDIA DGX BasePOD™ Administration: Private Workshop	This course provides an overview of DGX BasePOD components and related processes, including the NVIDIA DGX A100 system, InfiniBand and Ethernet networks, tools for in-band and out-of-band management, NGC, the basics of running workloads, and specific management tools and CLI commands. It includes instructions for managing vendor-specific storage per the architecture of your specific DGX BasePOD solution. > Learn More	System and network administrators and IT professionals that need to configure and verify the configuration and performance of DGX A100 clusters.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		DGX BasePOD cluster	English	16 hours	Contact us	N/A
NVIDIA DGX SuperPOD™ Administration: Private Workshop	This course is designed to help IT professionals successfully administer all aspects of a DGX SuperPOD cluster, including compute, storage, and networking. > Learn More	System and network administrators and IT professionals that need to configure and verify the configuration and performance of DGX SuperPOD clusters.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		DGX SuperPOD cluster	English	16 hours	Contact us	N/A

Virtualization

NVIDIA AI Enterprise Administration: Public Bootcamp	This course covers the platform and solution overview, hardware and software architecture, deployment options, licensing, temporal and spatial GPU partitioning, scaling, comprehensive validation, management, maintenance, monitoring, and troubleshooting. > Learn More	System administrators and IT professionals that need to install, configure, manage, monitor, and troubleshoot the configuration and performance of their NVIDIA AI Enterprise solution.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		NVIDIA AI Enterprise	English	12 hours	\$1,500	N/A

Online, Self-Paced Courses for Administrators

Course Name	Description	Prerequisites										
AI and Data Science												
AI Infrastructure and Operations Fundamentals	In this course, we'll start with an introduction to AI, where we'll cover basic AI concepts and principles. Then we'll delve into data center and cloud infrastructure before exploring AI operations. > Learn More	None										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>English</td> <td>7 hours</td> <td>\$49</td> <td>Available</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	N/A	English	7 hours	\$49	Available	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
N/A	English	7 hours	\$49	Available								
NVIDIA AI Enterprise Administration	This course covers the platform and solution overview, hardware and software architecture, deployment options, licensing, temporal and spatial GPU partitioning, scaling, comprehensive validation, management, maintenance, monitoring, and troubleshooting. > Learn More	To gain the most value from this course, the target audience should have a working knowledge in the following domains: <ul style="list-style-type: none"> > Data Center Infrastructure: Servers, Storage, Networking, GPUs, Operating Systems. > Virtualization: VMware vSphere. > Containerization: Docker. 										
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Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
NVIDIA AI Enterprise	English	8 hours	\$99	N/A								
Cluster Administration												
NVIDIA Base Command™ Manager	This course is based on NVIDIA Base Command Manager and gives an overview of the cluster management tools, Bright View and cluster management shell (CMSH). > Learn More	None.										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>Base Command Manager</td> <td>English</td> <td>5 hours</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	Base Command Manager	English	5 hours	Free	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
Base Command Manager	English	5 hours	Free	N/A								
Base Command Manager Autoscaling Hybrid Cloud	This course is based on NVIDIA Base Command Manager and gives an overview of extending the cluster to the cloud with Cluster as a service and cluster extension (i.e., hybrid cloud). > Learn More	None										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>NVIDIA Base Command Manager</td> <td>English</td> <td>3 hours</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	NVIDIA Base Command Manager	English	3 hours	Free	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
NVIDIA Base Command Manager	English	3 hours	Free	N/A								

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Course Name	Description	Prerequisites										
Introduction to Base Command Manager	This course is based on NVIDIA Base Command Manager and gives an overview of the usage and components of the software. > Learn More	None										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>NVIDIA Base Command Manager</td> <td>English</td> <td>3 hours</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	NVIDIA Base Command Manager	English	3 hours	Free	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
NVIDIA Base Command Manager	English	3 hours	Free	N/A								

Ethernet

Network Administration With the NVIDIA Onyx™ Switch System	This course provides the required set of skills to configure and manage NVIDIA Ethernet switch systems. You'll learn in depth layer 2 configurations such as VLAN, STP, LAG, and MLAG, as well as how to configure layer 3 features such as BGP. > Learn More	<ul style="list-style-type: none"> > Basic understanding of Ethernet network principles. > Basic understanding of switching and routing concepts. 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>NVIDIA Onyx</td> <td>English</td> <td>3 hours</td> <td>\$99</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	NVIDIA Onyx	English	3 hours	\$99	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
NVIDIA Onyx	English	3 hours	\$99	N/A								
RDMA Over Converged Ethernet (RoCE) From A to Z	In this course, you'll learn what RoCE is, how it works, the different network types RoCE can run over, and how to configure RoCE for each network type. > Learn More	Basic understanding of networking concepts and the Open Systems Interconnection (OSI) model.										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>RoCE</td> <td>English</td> <td>2 hours</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	RoCE	English	2 hours	Free	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
RoCE	English	2 hours	Free	N/A								

InfiniBand

InfiniBand Essentials	This self-paced course covers the fundamental first steps into the world of InfiniBand. If you're looking to become more familiar with InfiniBand's benefits, uses, architecture layers, and management concepts, this is the best place to start. > Learn More	General understanding of networking concepts and principles.										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>InfiniBand</td> <td>English</td> <td>1.5 hours</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	InfiniBand	English	1.5 hours	Free	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
InfiniBand	English	1.5 hours	Free	N/A								
InfiniBand Professional	This course covers the fundamentals of the InfiniBand technology from a usability point of view and builds on the details of the InfiniBand architecture specification. You'll learn how to install, configure, manage, troubleshoot, and monitor your InfiniBand network. > Learn More	General understanding of networking concepts and principles.										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>InfiniBand</td> <td>English</td> <td>6 hours</td> <td>\$250</td> <td>Available</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	InfiniBand	English	6 hours	\$250	Available	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
InfiniBand	English	6 hours	\$250	Available								

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Course Name	Description	Prerequisites										
Management												
Data Center Management Made Easy With NVIDIA UFM®	Learn about NVIDIA Unified Fabric Manager (UFM) and its capabilities, advantages, and components through a set of interactive learning units, videos, and simulators. > Learn More	Understanding of InfiniBand fabrics and management concepts										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>English</td> <td>3 hours</td> <td>\$49</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	N/A	English	3 hours	\$49	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
N/A	English	3 hours	\$49	N/A								
NVIDIA License System	NVIDIA License System (NLS) is a new licensing solution to support the continued expansion of the NVIDIA enterprise software portfolio. This course will help you to learn about NLS and how you can move from your existing licensing solution to NLS. > Learn More	<ul style="list-style-type: none"> > Basic understanding of virtual appliances installation and setup. > Familiarity with web/cloud-based applications. > Familiarity with NVIDIA products like virtual GPU (vGPU) and NVIDIA AI Enterprise. 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>Cloud License Service (CLS) and Delegated License Service (DLS)</td> <td>English</td> <td>2 hours</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	Cloud License Service (CLS) and Delegated License Service (DLS)	English	2 hours	Free	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
Cloud License Service (CLS) and Delegated License Service (DLS)	English	2 hours	Free	N/A								
Network												
Ansible Essentials for Network Engineers	In this course, you'll explore a variety of Ansible modules and write playbooks specifically adapted to modern data centers. This course includes an exclusive hands-on lab environment and exercises to practice real-world scenarios in real cloud environments. > Learn More	<ul style="list-style-type: none"> > Basic Linux administration. > General understanding of networking concepts and principles. 										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>Ansible</td> <td>English</td> <td>3 hours</td> <td>\$49</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	Ansible	English	3 hours	\$49	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
Ansible	English	3 hours	\$49	N/A								
Introduction to Networking	In this course, we'll cover the basics of Ethernet technology and understand how data is forwarded in an Ethernet network. > Learn More	None										
	<table border="1"> <thead> <tr> <th>Tools, Libraries, Frameworks</th> <th>Languages</th> <th>Duration</th> <th>Price</th> <th>Certification Exam</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>English</td> <td>1 hour</td> <td>Free</td> <td>N/A</td> </tr> </tbody> </table>	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam	N/A	English	1 hour	Free	N/A	
Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam								
N/A	English	1 hour	Free	N/A								

Course Name	Description	Prerequisites			
MLXlink and MLXcables Debug Tools	In this course, you'll learn about the MLXlink and MLXcables debug tools. These debug tools are used for both basic link troubleshooting and for analyzing the more complex link characteristics. > Learn More	Good technical background and understanding of networking hardware.			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
	MLXLink and MLXcables	English	2 hours	Free	N/A
NVIDIA BlueField® DPU Administration	Learn the basic concepts of BlueField DPUs as a platform for accelerated data center computing. > Learn More	<ul style="list-style-type: none"> > Basic knowledge and experience in networking concepts and principle. > Basic knowledge and experience in Linux administration. 			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
	N/A	English	3 hours	\$49	N/A
RDMA					
The Fundamentals of RDMA Programming	This course allows C programmers to dive into the RDMA programming world without requiring previous experience in networking or RDMA programming. We've also added tips and tricks, as well as do's and don'ts, so the skills you acquire will truly serve you when you need them. > Learn More	Understanding of C/C++ programming.			
	Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
	RDMA, C/C++	English	4 hours	\$49	N/A

Certifications

Certification Name	Description	Prerequisites				
NVIDIA-Certified Associate: AI Infrastructure and Operations	This is an entry-level credential that validates the foundational concepts of AI computing related to infrastructure and operations. The exam is online and proctored remotely, includes 50 questions, and has a 60-minute time limit. > Learn More	A basic understanding of data center infrastructure.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		N/A	English	1 hour	\$135	Available
NVIDIA-Certified Associate: Generative AI Large Language Models	An entry-level credential that validates the foundational concepts for developing, integrating, and maintaining AI-driven applications using generative AI and large language models (LLMs) with NVIDIA solutions. The exam is online and proctored remotely, includes 50 questions, and has a 60-minute time limit. > Learn More	A basic understanding of generative AI and large language models				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		N/A	English	1 hour	\$135	Available
NVIDIA-Certified Associate: Generative AI Multimodal	An entry-level credential that validates the foundational skills needed to design, implement, and manage AI systems that synthesize and interpret data across text, image, and audio modalities. The exam is online and proctored remotely, includes 50 questions, and has a 60-minute time limit. > Learn More	A basic understanding of generative AI				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		N/A	English	1 hour	\$135	Available
NVIDIA-Certified Professional: InfiniBand	This is an intermediate level certification that validates core concepts for designing, deploying, and managing NVIDIA InfiniBand fabrics. The exam is online and remote proctored with 40 questions and a time limit of 90 minutes for completion. > Learn More	A thorough understanding of data center infrastructure and networking.				
		Tools, Libraries, Frameworks	Languages	Duration	Price	Certification Exam
		NVIDIA InfiniBand fabrics	English	1.5 hours	\$220	Available

Ready to Get Started?

To get started with hands-on training, visit www.nvidia.com/en-us/learn/organizations/

For questions, [contact us](#).

