LMC 6310 Computer as Expressive Media

The Computer Expressive - 91082 - LMC 6310 - HCI
Fall 2024
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Where? Skiles 346
When? Tue + Thu 9:30-10:20   +   Fr 9:30-12:15 (lab)
Nitsche office hours   (TBC)
Pait office hours   (TBC)

Outline

This course asks: How can we express ourselves through computers? To explore this challenge, it invites students to approach computers and digital media as creative environments that offer their own opportunities and limitations. We will tackle the kind of computational creativity they allow. The focus is on a media-driven exploration and experimentation. This requires us to gain basic computational literacy and more importantly a critical perspective to digital practices. The course provides a critical making approach to digital media studies and should speak specifically to HCI students interested in media design.

This version of the course follows a media-centric approach. We will cover narrative, procedural, and performative media in multiple steps: First, we get an introduction to these media's specific elements. Then, we will question them and discuss how computation affects and challenges these qualities. We will conduct hands-on projects for each of these three domains, which will consist of various prototypes implemented for each stage of the course. The projects will inherently include forms of interaction design but the focus will remain on the media qualities and their adaptation.

Students will read selected foundational texts for specific media formats, present examples, engage in critical reflections, discuss the challenges at hand, and experiment with their own responses to them through the assignments. No coding or hardware experience is required to take the course but you will be introduced to P5.js, and Arduino.
Projects will require some purchases. There will be support for the prototyping kits for the Arduino but the course projects might require other components, too.
There is no single textbook and all readings will be online. We will use online tools to support collaboration as effectively as possible as this is a course that builds on active discussion and critical reflection.

Goals

The projected learning outcomes of this course are:
- Gain familiarity with seminal readings and works in the fields of interactive narrative, generative art/coding, and interaction design.
- Demonstrate comprehension, application, and justifications of theoretical knowledge when creating digital media artifacts.
- Demonstrate the ability to design, create, and assess digital media artifacts and contextualize them within theoretical frameworks, combining humanities and computation to "make with meaning."

Textbooks

There is no single textbook/ all readings are online. One book worth exploring might be:
Bogers, Loes, and Letizia Chiappini, eds. 2019. *The Critical Makers Reader.*
      (Un)Learning Technology. Amsterdam, NL: Institute of Network Cultures.
      (available online)

Labs and Technology

Friday sessions are lab sessions hosted by TA Supratim Pait. They will provide introductions to the main technologies used in this course: P5.js, and Arduino. Students will be expected to install the necessary software and purchase the necessary hardware.

We will use a blog to support discussion and create an evolving debate on our topics. While this blog is only within the Tech firewall, it is possible that future students and other people can see these posts. Please be aware of that.
Feel free to post anonymously, use pseudonyms, or – if you want to stay within Canvas: post on the Discussion board there. This will not affect any grade. We want to protect your privacy while we also try to make your work as accessible to fellow students as reasonable.

Likewise, please let the instructors know if you would prefer your contributions and projects to be excluded from future references (e.g. as examples for students in future classes or as examples in scholarly events such as workshops or talks).

Schedule
(adjustments are bound to happen)

	Field/ question/ method	
8/20	**How did we get here?**	
8/22	**Critical practice** **Discussion of syllabus**	Dada Ratto/ Hertz
8/23	Lab	
8/27	**Intro: Narrative** (Prompt)	Chatman Rettberg Aarseth
8/29	**Narrative at work** (in class groups/ discussion)	Hartmann Dunne/ Raby
8/30	Lab	
9/3	**Examples: Interactive stories** (presented by students)	
9/5	**DUE: Narrative media idea** (presentation of your concept in class)	
9/6	Lab	
9/10	Work on project	
9/12	Work on project	
9/13	Lab	

9/17	**DUE: Narrative media project** (in-class presentation and blog post)	
9/19	**Intro: Visual and procedural media** (Prompt)	Murray Wardrip-Fruin
9/20	Lab	
9/24	**Examples: Visual and procedural media** (presented by students)	Sample selection will be provided you sign up online
9/26	**DUE: Visual media project idea** (in class mini presentation)	
9/27	Lab	
10/1	Work on projects	
10/3	Work on project	
10/3	Lab	
10/8	Work on project	
10/10	**DUE: Visual media project** (in class presentation and blog post)	
10/11	Lab	
10/15		
10/17	**Intro: Performative Media** (Prompt)	Schechner Butler
10/18	Lab	
10/22	TBC	
10/24	**Complicating performance** (in class groups/ discussion)	Haraway (Lehmann)
10/25	Lab	
10/29	**Complicating material** (in class groups/ discussion)	Gatt/ Ingold Bellacasa (Klefeker/ Devendorf) (Nimkulrath) (Kember/ Zylinska)
10/31	**Examples: Performance** (presented by students)	Sample selection will be provided you sign up online
11/1	Lab	
11/5	**DUE: Performative media project idea** (short in-class presentation)	
11/7	Work on project	
11/8	Lab	
11/12	Work on project	

11/14	Work on project	
11/15	Lab	
11/19	Work on project	
11/21	DUE: Performative media project prototype (informal presentation in class)	
11/22	Lab	
11/26	Work on project	
11/28		
11/29		
12/3	**DUE: Performative media project presentation** (in-class)	

Main Assignments

Critical analysis: Example presentation: students will present a sample project from one of the three "media fields" narrative/ visual/ performative; there will be three presentation slots but you will only present in one of them; students will sign up early in the term for "their" example; the goal is to present a particular digital media piece that lives in one of the three core domains we cover in the class; clarify the background, possibly the technology, and importantly: bring up critical questions for the class to discuss to stimulate and guide a discussion; share your thoughts with the whole class in a ppt presentation
Delivery format: presentations will be in class; each group member should present a part; length: ~ 15 min + q&a
You hand in: in-class presentation + upload the ppt on Canvas

Making: Narrative Media: each student will develop individually a PS5.js project; inspiration: pick an existing short (!) text like a short story, a poem, a song or the beginning of a longer piece; think about what narrative intervention or change could happen to that text (e.g. what would happen to this text if the antagonist would narrate it? What would happen if this text would be told 100 years earlier or later? What would happen if the location changes? The time? The roles? The language? The genre?); based on this intervention you will develop your own interactive intervention onto the text; use only text-based means; explore the technology (P5) and experiment with its effects on the piece; the goal is to show critical engagement through prototyping; provide a blog post that describes your idea, its development, and the final result
Delivery format: presentation in class; blog post; code
You hand in: project/ code on Canvas

Making: Visual Media: each student will develop individually a P5.js project; inspiration: make an interactive poster (technically: an program running on a computer that looks like a poster); the interactive access and procedural operation should reflect the logic of what the poster is about; Is this a poster that tries to sell something – then how could the interaction support that more? Is it a poster for a musical event – what kind of interaction would allow for that specific to come forth? Is the poster political, an announcement, a threat …? The computational operation should relate to the rhetoric of the source; the

goal is to show critical engagement through prototyping; provide a blog post that describes your idea, its development, and the final result
Delivery format: presentation in class; blog post; code
You hand in: project/ code on Canvas

Making: Performative Media: individual students will develop an Arduino project; theme: create "objects of tomorrow"; that entails: 1) identify a key problem that needs to be resolved in the future; 2) design a speculative object that highlights an expressive and dramatic response to that problem; 3) implement and 4) perform the object; the technical focus here is on building on embodied interaction in relation to the physical and digital parts; how does your design combine physical and digital media to turn the object into a performative and expressive one? How does this expression emphasize the solution it deals with? Does it engage us as participating audiences? You can combine different technologies here if it is feasible but they should include an Arduino; the thematic focus is on a dramatized "futuring"; What is a challenging problem that needs to be addressed in the future? How the response/ complication look? How to make it most performative and dramatic?
provide a substantial blog post that describes your idea, its development, and the final result; you also should create a short video that describes you project and the results as well as 10 or more images of process and 10 images or more of the result
Delivery format: presentation in class; blog post; code
You hand in: project/ code/ images/ video on Canvas

Participation: active in discussions; contributions to the opening questions; attendance (please note: attendance is only the basis for participation); at different junction points during the course, students might receive questions/ prompts from the instructor; students will reply to this prompt with own statements, examples, arguments and interpretations; students are encouraged to also interconnect responses and relate to the posts of other students and relate to material beyond the class; keep an academic etiquette but clearly lay out and justify own positions
Delivery format: participation in class; participation in blog discussion, response to prompts
You hand in: (nothing due on final date but continuous contributions during coursework)

ADAPTS Accommodation
Any student who feels that he/she may need an accommodation for any sort of disability, please make an appointment to see the instructor during office hours. Students with disabilities should also contact Access Disabled Assistance Program for Tech Students (ADAPTS) to discuss reasonable accommodations. For an appointment with a counselor call (404) 894-2563 (voice) / (404) 894-1664 (TDD) email dsinfo@gatech.edu or visit Suite 123 in the Smithgall Student Services Building.
For more information visit the following website:
http://www.adapts.gatech.edu/

Grading and Main Deliverables

Assignment	Deliverable and key criteria	% of final grade

Narrative media project	Students will develop individual projects over stages: idea presentation, discussion in small groups and with instructor(s), informal prototype, and final presentation in class; they will also post a substantial blog post for each project (including images, descriptions, design thinking, relations to class discussions and topics, link to prototype/ code/ videos/ images Did you integrate the discussions and problems identified in class in your design thinking? Did you use the artifact to continue that exploration (do you ask an interesting question/ pose a challenge/ destabilize an assumption)? Did you implement the artifact well (technically, visually, interface, experience)? Did you work well with others? Did your post reflect your critical thinking?	**15%**
Visual media project	Students will develop individual projects that exemplify procedural visual media use; the projects have to take some input that is computed and causes novel output on the project; projects develop over idea presentation, discussion in small groups and with instructor(s), informal prototype, and final presentation in class; students will also post a substantial blog post for their project (including images, descriptions, designs, relations to class discussions and topics, if possible: link to prototype/ code and other documentation as well as external references Did you integrate the discussions and problems identified in class in your design thinking? Does the project present an interesting approach to procedural media qualities? Did you ask an interesting question/ pose a challenge/ destabilize an assumption? Did you implement the artifact well (technically, visually, interface, experience)? Did you work well with others? Did your post reflect your critical thinking?	**15%**
Performative media project	Students will work individually to develop and implement a digital media prototype addressing issues of performance; our theme is "objects of tomorrow" that address/ clarify/ dramatize … key challenges we might face; students will design own tangible interfaces (low-fi prototypes – not products); the process and critical reflections mirror those of the first two projects but will require more expansive answers (e.g. the blog post should offer a substantial project reflection of around 800 words; it should include images of both the making and	**35%**

	design process as well as the final result), the final presentation and the blog post should connect the project to at least to readings; the project video should be a clear description of the project for anyone lacking prior knowledge In addition to the usual project requirements: a short YouTube style **video** (~ 2 min) that explains the project's nature, evolution, and results You hand in: >10 images of the project in process; >10 images of final project; all development materials (ppts, design docs, sketches); video – all on Canvas (please indicate if it is NOT ok to re-post your project video as MN might post it openly – this will not affect your grade)	
Example presentation	Students will present a particular example related to a specific format; you will present in class (~15 min) on the piece, its history, context, how it works, and your assessment of it in relation to the discussion in class How clear was the project breakdown? Did you use materials efficiently (slide design, use of images, use of video)? Was the presentation well delivered? Did you develop your own critical stance toward the project (e.g. visible in questions you might ask the piece) Ability to answer question in q&a?	**15%**
Participation	active in discussions, active in example sessions; all prompts submitted and creative tackling of the prompts and online conversations as well as in class discussions	**20%**

Grade breakdown:
100-90% = A
89-80% = B
79-70% = C
69-   = D

Grading of individual pieces will be in percentage
Late submissions lead to automatic reductions of the grade unless a valid excuse is provided. Any 1 day delay, meaning anything after 5pm of the due day, will have 10% reduced from the grade; any 2 day delay will have 20% reduced, 3 day delays will not be accepted.
The Honor Code of Georgia Tech applies (see http://www.honor.gatech.edu/).

Workload
Students are expected to work not only in class but also outside regular class meeting times on projects. The class is in-person but we will use online mechanisms (blogs, Teams)**.** This course assumes students' familiarity with e.g. Gimp, Office, and other collaborative and design-based tools.

What to do if you fall behind or are stressed

Your health is more important than this class. Please inform the instructor of any issues or challenges and do not hesitate to reach out.

Coursework can be demanding and everybody can encounter challenges sometimes. There are many reasons, such as an illness or family emergencies, that might affect focus and studying conditions. If this happens to you, come and see the instructor about it as soon as possible to make alternate arrangements for work that has been missed, and continue coming to class.

If you encounter more pressing difficulties, anxieties, or mental health challenges, then please let the instructor know but also turn to the support we have in place at the Institute. This includes the Counseling Center (https://counseling.gatech.edu/) and CARE (https://care.gatech.edu/).

Inclusivity Statement

The Ivan Allen College of Liberal Arts supports the Georgia Institute of Technology's commitment to creating a campus free of discrimination on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status. We further affirm the importance of cultivating an intellectual climate that allows us to better understand the similarities and differences of those who constitute the Georgia Tech community, as well as the necessity of working against inequalities that may also manifest here as they do in the broader society.

Attendance

A student is allowed three unexcused absences (regarding all meetings). With the fourth absence, the student's grade will be lowered by 8% point, with the fifth an additional 8%, six absences are an automatic failure of the class.

If a student needs to miss a class, contact the instructor at least 24 hours in advance. If Institute Approved Absences collide with class times please contact the instructor in advance to make sure the workload can be distributed.

The use of cell phones or headphones during class is seen as a disturbance and not permitted. If you have to use your cell phone for some reason, then inform the instructor ahead of a session.

References

(selection)

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