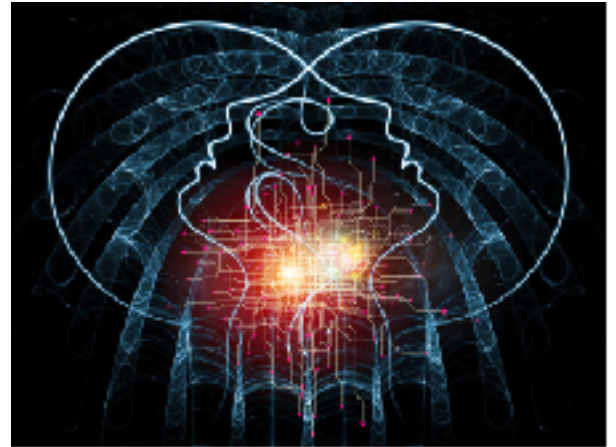


LMC 6650 BM / CS 8803

Instructor: Brian Magerko
Office: MS Teams
Email: magerko@gatech.edu
Contact hours: message on MS Teams to schedule
to an online chat

Class meetings: T 12:30 pm - 1:45 pm, 2pm - 3:15pm
All meetings are on MS Teams. Join the team
[here.](#)



This syllabus is a living document subject to change during the term.

Course Description

This course examines AI as an expressive medium--and how we can design and develop creative human-centered AI experiences. The course will be split into student-lead paper presentations and team-based projects. Projects this term are centered on the following potential projects:

- 1) Co-creative drawing partner--designing and developing a co-creative AI that employs machine learning and perceptual filtering based on cognitive psychology theories of perception for abstract drawing
- 2) Generating virtual environments from text--using data mining of narrative text sources to generate virtual rooms from text queries ("Computer, give me a detective's office.")
- 3) [AI game agent for playing Dixlt](#)--building an AI that can play a basic version of the board game Dixlt, which involves interpreting surrealistic images and giving verbal clues about the image that are "not too vague but not too specific" for some human game players to understand but not others.
- 4) ~~Generative poetry from newsfeeds--building an AI that can generate poems in a specific form of poetry from content in daily news articles online.~~
- 5) ~~Generating music from motion (smaller scope)--building a framework for improvisational / generative audio compositions based on real-time dyadic human-contemporary dance moves~~

Work on any of these projects will involve researching & decomposing the problem, identifying the appropriate technologies and critical path for a solution, and implementing a functioning prototype of said solution.

Videos from the instructor's previous studio projects can be found [here](#).

M.S. Learning Objectives

- Demonstrate the ability to analyze and critically evaluate existing digital media artifacts, services, and environments using formal knowledge, and to explain and defend one's critical evaluation.
- Demonstrate the ability to devise, design, create, and assess prototypical digital media artifacts, services, or environments and to contextualize them within recognized traditions of practice.
- Demonstrate use of digital media to create prototypes
- Demonstrate good time management skills
- Develop interactive media artifacts
- Can justify the design choices in their works
- Can formulate and test design hypotheses
- Can communicate, coordinate, and work productively as a team member

Ph.D. Learning Objectives

- Students can identify and analyze a domain within the field of digital media and identify areas for original contribution as well as methods to pursue these contributions.
- Apply theoretical concepts to specific digital media works
- Students can formulate and explore the answers to critical questions in the domains of Arts & Entertainment, Public & Civic Media, and Knowledge & Creativity as related to new media
- Summarize and paraphrase key theoretical works

Attendance & Participation

Class attendance and participation is (quasi)-mandatory. Participation in class discussion is imperative because it allows you to explore the readings, computing concepts, and projects collaboratively, and in the process, discover meanings and issues that you probably would not discover on your own. Participation in class also challenges you to continuously question, refine, and articulate your own ideas and interpretations.

In addition, much of this class is based in critiques, which require full participation and cannot be replicated outside of class. Extensive teaching and learning occur through critiques: it is through critiques that you will develop your skills for both making and

discussion of the made. Thus, your attendance and participation in critiques is an important and required aspect of this class.

That being said--we are living in unprecedented times, and I will be both understanding and flexible with everyone's needs as they work from home.

Also, I heavily discourage any project teams from meeting in person.

Grading

If you complete all of the requirements for the assignment reasonably well, you should expect to earn a B. In order to earn an A, you must complete and go "above and beyond" all of the requirements and your work must be exceptional across multiple grading factors.

Absence from more than three classes will result in the loss of 1-letter grade for the course.

Tardiness for more than four classes will result in the loss of 1-letter grade for the course.

Information for Students with Disabilities

Please notify the instructor if you have any disabilities with which you need special assistance or consideration. The campus disability assistance program can be contacted through ADAPTS:

<http://www.adapts.gatech.edu>.

Honor Code Statement

Students are expected to adhere to the Georgia Tech Honor Code: <http://honor.gatech.edu>.

Assignments

Students will be graded based on their class participation (1/3), team proposals (1/3), and the final prototype presentation (1/3).

Course Schedule

Half of each class will be dedicated to research discussions, design meetings, and project coordination.

The other half will be a student-led reading group focused on topics related to our work, including research in cognitive science, arts and design, machine learning, HCI, and AI.

Schedule

[Go here for the editable schedule for signing up for presentations, etc.](#)

Final Project Rubric

The final project presentation is your graded deliverable for the term and is graded on the following rubric:

- 25%: Quality of presentation materials & delivery (each team member should participate in the presentation)
- 25%: Presentation of a working computational prototype (this can be a pre-recorded video or live demo) and related materials (e.g. material research, surveys, etc.)
- 25%: Quality of the communicated design process & documentation
- 25%: Contextualizing the work (and potential future work) related to previous published research & works (by others)