CS 8001 OLM Syllabus

Human-Centered Large Language Models Design

Summer 2026

Instructor Information

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General Course Information

Description

As Large Language Model (LLM) technologies continue to advance in complexity, their application domains are increasingly broad. This seminar delves into the realm of LLMs, focusing on how we can apply key concepts of Human-Computer Interaction (HCI) to LLM research. Students will read both foundational and cutting-edge papers and participate in weekly discussions to further explore the topics of AI. We will explore how these topics can be applied to advancements in both industry and research settings. Topics include user-centered design of LLMs, ethics, and accessibility of AI, as well as topics related to student interests. Classes will cover theoretical foundations, as well as provide a practical framework for students to develop a comprehensive research proposal. Students will have the opportunity to explore their own interests as part of a course-long investigation of a novel application of AI.

Pre- &/or Co-Requisites

There are no formal pre-requisites for this course beyond an interest in learning about the design of LLMs.

Course Learning Outcomes

Upon successful completion of this course, you should be able to:

- Describe the basic construction and function of LLMs in laymen's terms; *this is not a technology-heavy course. Instead it is a broad survey of how to do research with LLMs and humans, and considers issues specific to designing with LLMs.*

- Describe the basic process of user-centered design as it pertains to LLMs.
- Identify challenges of designing for LLMs, ways to design around these challenges, and approaches to evaluating LLM-based technology design..
- Identify 1-2 significant issues around the intersection of accessibility ethics in LLMs

Required Course Materials

No texts are required, we will provide PDFs or links to all readings

Additional Materials/Resources

You should have consistent access to internet to participate in online meetings and to access discussion forums.

Course Website and Other Classroom Management Tools

We have a canvas site, which we will update throughout the course.

We will determine which discussion forum we will use throughout the course.

Course Requirements & Grading:

We hope that you will attend the class and participate in discussions and assignments. We have traditionally had a live lecture on Wednesday nights, however we will explore different formats with students based on class enrollment and attendance. We grade 'participation' in terms of how consistently you attend and/or contribute to synchronous and asynchronous discussions and assignments. Intellectual engagement will be judged by the quality of your work and your contributions to course discussions.

Overview:

You must earn 60 points to pass the course

- Weekly Reading Responses (28 total points)
- Design Exploration Presentations (30 total points)
- Guest Lecture Attendance (12 total points)
    - Guest Lecture: Post only (3 total points)
- *from time to time, we offer social discussion posts for extra credit (usually about 2 points per post), keep an eye out!*

Weekly Reading Responses (7 posts, 4 pts each; Total 28 points)

We will post weekly readings that align with each course topic. Please make good-faith effort to complete these readings so we are all on the same page for discussions. Typically, we ask students to complete a readings response and respond to peers' ideas. See the post for details. These responses should be uploaded the Monday following lecture at 9 am.

Design Exploration Presentations (2 presentations, 15 pts each; Total 30 points)

The design exploration focuses on thinking about a technology you would like to design and telling us about it. We expect very early design ideas to help us talk about real-world issues you encounter.

We expect presentations will opportunities to talk, rather than polished decks. In previous semesters, we have had students bring in 1-2 hand-drawn rough sketches of ideas to share and talk about; this is just fine for this course.

Presentation 1 - Initial Idea: You will complete a short presentation about an area you are interested in designing an LLM-based technology for. More information will be provided later in the semester.

Presentation 2: Update: You will complete a short presentation of how the exploration and design went throughout the semester. More information will be provided later in the semester.

Guest Lecture Attendance (3 guest lectures, 4 pts each; Total 12 points)

Guest Lecture - Post only (3 guest lectures, 1 pt each; Total 3 points)

You will get points for attending live guest lectures, and asking questions. We will also award points for submitting questions before noon EST on the day of the lecture. You can receive up to 5 points per guest lecture if you both attend AND submit a question.

Course Policies

Attendance and/or Participation

This course will encourage students to co-construct their own understandings and knowledge of LLMs together. As such, we hope that you will consistently make an effort to attend the class discussions and be active on the discussion boards.

Collaboration & Group Work

We encourage students to work together, talk together, and exchange ideas. We expect you to give credit to those in your group and to decide between each other what a fair distribution of labor is if you are in a group. Please talk to group members if there are challenges with collaboration, and reach out to us if you are unable to resolve challenges on your own.

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

Weekly discussions are due the Monday following lecture at 9:00 am. We will grade posts every two weeks. You will lose one point for each week it is late. *We will discuss make-ups on a case-by-case basis. Please email us if you have questions or concerns.*

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.