Syllabus for CMSC 500

Fall Term 2025   10:25-11:20 TTh   Mr. Gregg

Course Description and Objectives

CMSC 500 is an introduction to AI Agents, which are applications built on top of large language models. In this course we are going to be learning to build AI agents using the LangChain/LangGraph framework and the OpenAI and OpenAI-Agents SDKs.

I plan to cover the following topics:

- Prompt engineering
- Maintaining context in multi-turn interactions
- Retrieval augmented generation, or RAG
- Working with tools
- Building complex agents

How this Course is Structured

We will meet two times a week for lectures.

I will assign weekly programming projects.

We will have one midterm exam and a final exam.

Grading Policy

Assignments and exams have the following weights:

Homeworks - 60%   Midterm exam - 15%   Final exam - 25%

Late policy for assignments is that assignments may be turned in after the initial due date for a 5% penalty for each day the assignment is late. We will waive all or part of the late penalty if you have a valid excuse; however, you must contact us before the initial due date to ask for an extension.

Textbook

Our text is *AI Agents and Applications* by Roberto Infante.

Office Hours

My office hour this term are 1:00-3:00 M-F.

Course Web Site

The course web site is at http://www.lawrence.edu/fast/greggj/cmsc500.html. The web site will feature lecture notes and other supplementary materials.