

Project additions

LLM Tool database access (RAG)

- Save/retrieve profile from Supabase
- Save/retrieve chats from Supabase
- Access university DB file using tools:
 - getMajorsByUniversity
 - getCoursesByMajor
 - visualizeCoursePath

LLM prompts the user without initial input (context aware*) to onboard them

```

async function buildUserContext(userId: string) {}
const user = await fetchUserData(userId);

return {
  User Profile:
  - Major: ${user?.major || "Unknown"}
  - University of Choice: ${user?.university || "Unknown"}
  - Application Year: ${user?.year || "Unknown"}
  - Goals: ${user?.interests || "Unknown"}
  - Is Student: ${user?.isstudent || "Unknown"}

  When responding, adapt your answers to this user's data.
  .trim();
}

```

Bot:

Hello! I'm your AI-powered college advisor, here to help you plan your academic journey, assist students in selecting courses based on their major and university, visualize course paths, provide personalized advice, and offer job market insights.

To get started, could you please tell me what major you are interested in? If you are unsure, that's perfectly fine!

Bot:

Welcome back! I'm here to help you plan your academic journey and to support you in selecting courses based on your major and university. My goal is to provide you with personalized advice, visualize course paths, and even share insights about the job market related to different majors.

Since you're unsure about your major, let's explore that together! First, could you please tell me what university you are considering? This will help me narrow down potential major options.

LLM auto normalizes user input to these tools

- comp sci == CS
- UMB == UMASS_BOSTON

"I'm a Computer Science freshman at UMB"

→ toolcall → thinking... (use 1 for umass boston, 1 for freshman)

→ saveUserProfile(1, "cs", 1, TRUE, [{"Computers", "Science"}])

LLM tells user when it is thinking and fetches response to thoughts automatically by looping until done

EXAMPLE PROMPT

"Give me a course path as a cs senior at umb interested in AI"

→ toolcall → thinking...

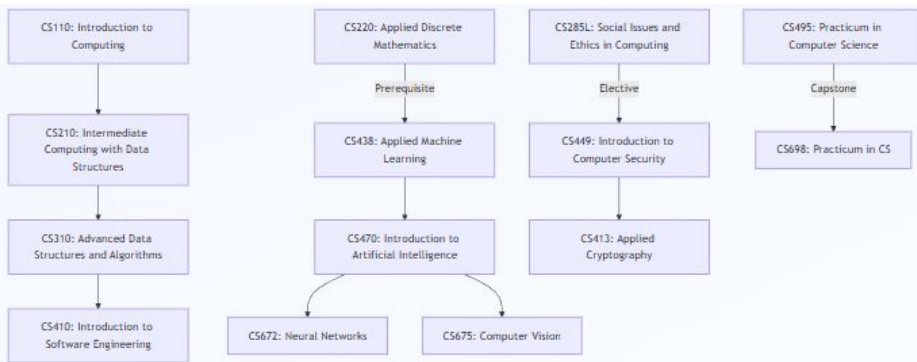
→ saveUserProfile(1, "cs", 4, TRUE, [{"AI"}])

→ getMajorsByUniversity(1) → MAJOR_LIST["CS"]

→ getCoursesByMajor("CS") → COURSE_LIST["CS110", "CS105"...]

→ visualizeCoursePath(courses) → mermaid code block

→ frontend visualizes mermaid code block



Bot:

This flowchart represents a sample freshman course path for a Computer Science major. You can adjust the courses and sequences based on your university's offerings and specific interests. If you need further assistance or modifications, feel free to ask!

You:

I am a cs freshman at umb

Bot:

Thinking...

Bot:

Your profile has been updated! You're currently a freshman majoring in Computer Science at UMB.

Would you like to explore the course offerings for your major? This can help you plan your classes for the upcoming semesters. Let me know!

Artifacts

Task Name	Description	Assignee	Done?
Create GitHub repo + deploy to vercel		Ayden	yes
Openai tool calling to read JSON file	Write a function that takes in a prompt and tool objects and returns the LLM response	Brandon	yes
Simple chat UI (frontend)		Vraj	yes
Team artifacts:	Using an environment variable, set up a secret keyword that the user must enter to access the data		
● CS server in /home/bsiscoe/cs410/proj3/artifacts/product_backlog.pdf (copy of spreadsheet shared between team members)			yes
● CS Server in /courses/cs410/f25/hdebloios/GROUP2/Apple folder	Transfer ownership of our github repo to the professor, and make sure everyone's origin URL is updated		yes
Individual artifacts:			
● Github commit history (branch bsiscoe)			yes
● CS Server in /home/bsiscoe/cs410/proj3/artifacts	Set up for individual courses and course paths		yes
Set up database and write schemas		Ayden	yes
Set up supabase and add example code to repo		Ayden	yes
Sprint: Graphic Chat			
Get data json file with just CS courses	Stretch goal: get full curriculum data	Keertan	yes
Integrate graph view with rich chart view		Vraj	
Split screen chat / graph view		Ayden	

Updated Info.txt https://cs.umb.edu/~bsiscoe/info_1553.txt Red = New

Skills:

Github/Git

Clean, maintainable code practices

Clear and efficient technical documentation

Rapid adoption of new languages, frameworks, and tools

Merge conflict resolution & workflow management

Full stack software design

- Python, Java, C, Typescript, React, Node, SQL, Databases, API design

LLM integration, tool-calling workflows, and prompt engineering

Preferred Roles:

Product Owner / Technical Product Lead

Proof-of-Concept (PoC) Developer

Lead Developer

Early-stage design & planning

System Architecture / Technical Design