

CourseCompanion: *AI Powered Support for Students & Instructors*

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**Engineering
& Computing**

Our Main Focus

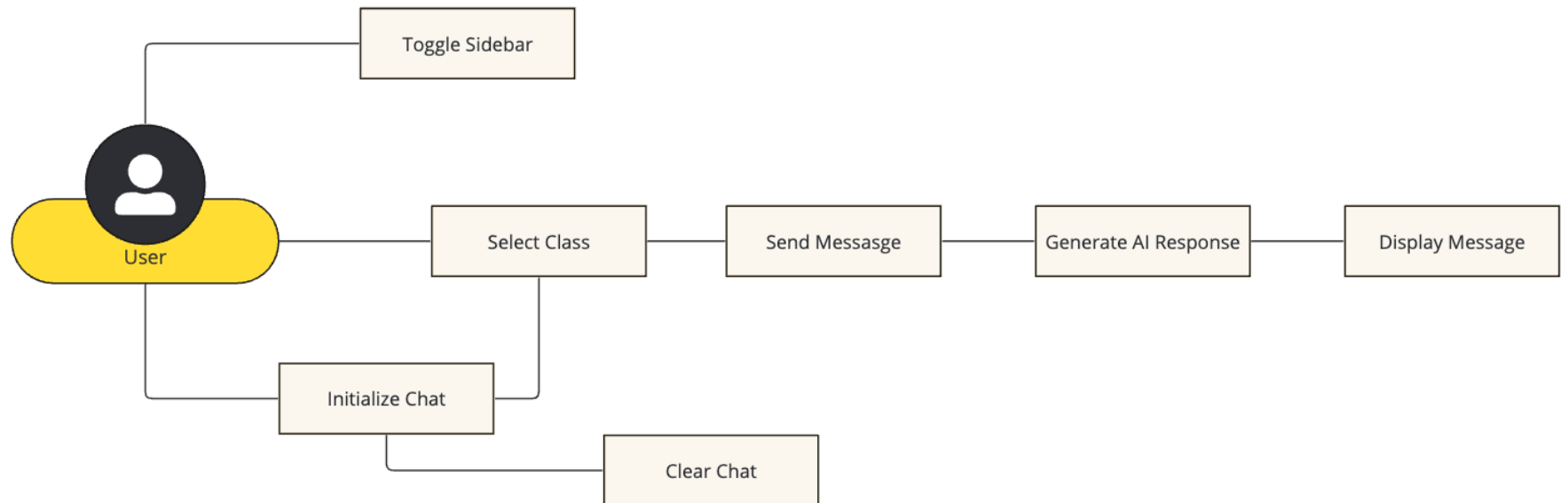
- Provide personalized course assistance for students who want to get information on the class.
- Create a dynamic interaction between the user and the AI chatbot.
- Establish an accurate guide based the syllabus provided by the class instructor.

User Stories

- Created software dependencies
- Connected server to ChatGPT API
- Created prompts using different syllabi
- Design and develop web page UI
- Created client and server

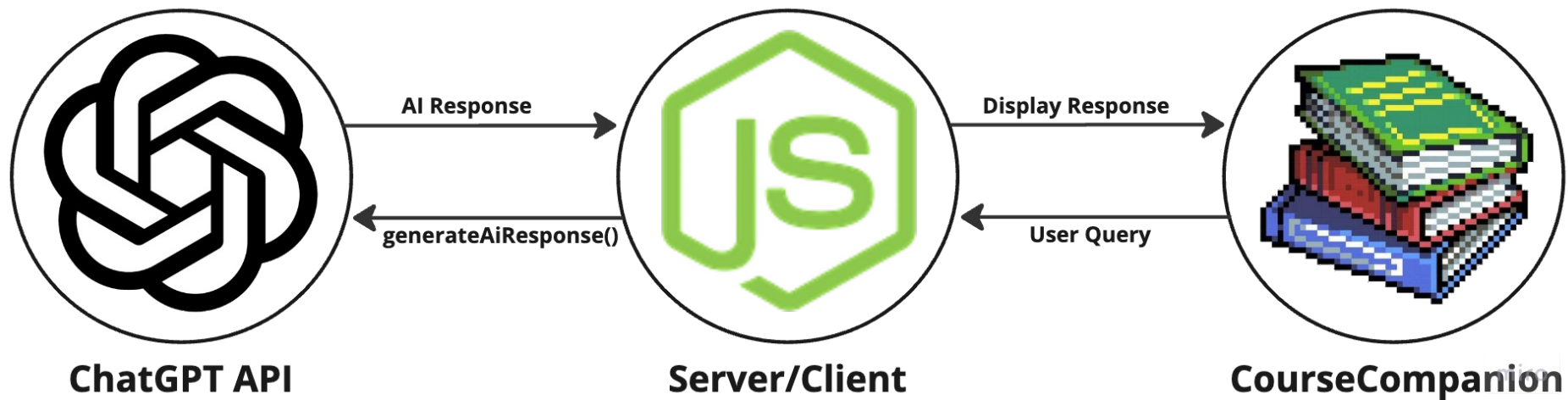
Use Case Diagram

- Our object design is based on our user, which is a student, and goes into detail on the user's capabilities.



Architecture Diagram

Our design mainly focuses on gathering user input and providing responses tailored to that input.



Implementation

Installed Software:

- VS Code
- Node.js

Project Backbone:

- ChatGPT API
- JavaScript
- HTML
- CSS

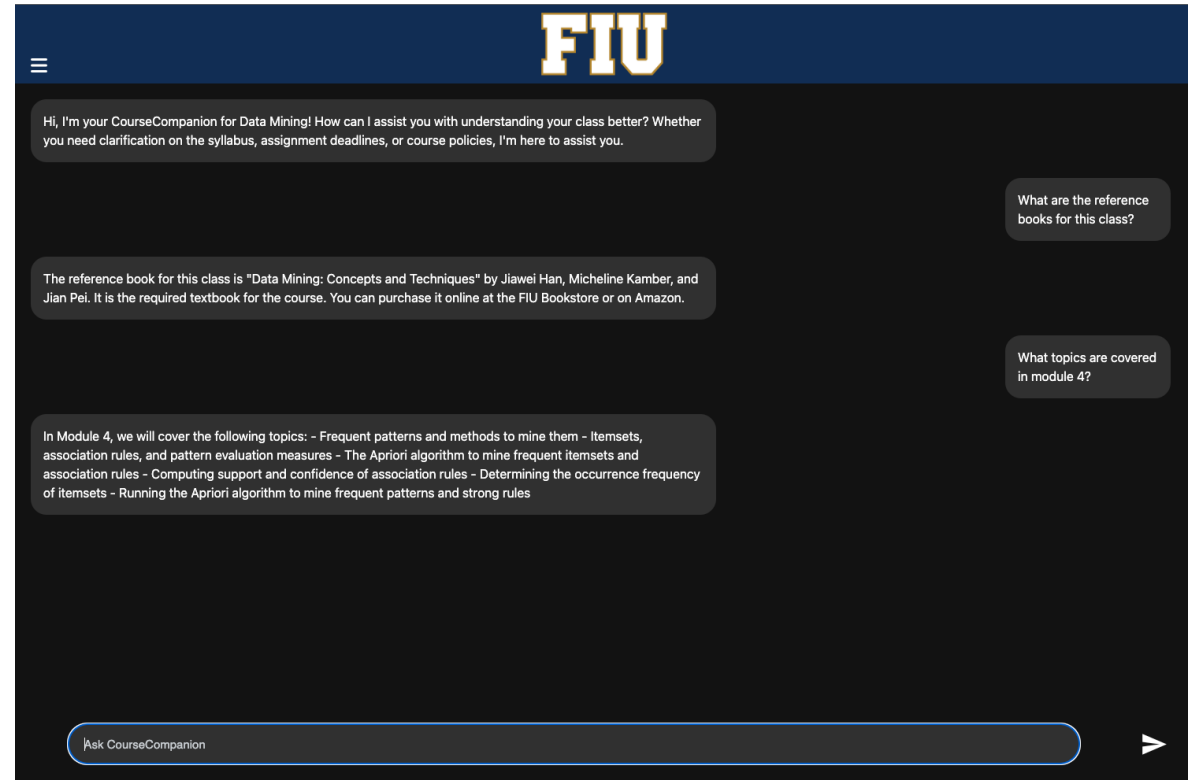




CourseCompanion Features

Our Webpage

- This is our webpage design, which includes the header, chat box, and input containers.



Connection to ChatGPT's API

```
// Send request to ChatGPT API
client
  .post("https://api.openai.com/v1/chat/completions", params)
  .then((result) => {
    // Process AI response and display it
    var aiChatBubble = document.createElement("span");
    aiChatBubble.classList.add("ai-chat-bubble");
    aiChatBubble.innerHTML = result.data.choices[0].message.content;
    var chatBox = document.getElementById("chatbox_grid_container");
    chatBox.removeChild(chatBox.lastChild); // remove the animation element
    chatBox.appendChild(aiChatBubble);
  })
  .catch((err) => {
    console.log("Error:", err.response ? err.response.data : err.message);
  });
}
```



Summary

- We wanted to leverage the new AI wave to help students succeed when the new semester starts. This application will be able to guide the students through the syllabus. Where they can ask personalized syllabus questions. Which also reduces noise for the professors, so they don't get swamped with syllabus questions.