

Homework - Create a full-stack clone of ChatGPT with streaming functionality using free LLMs

Objective: Implement a clone of ChatGPT using free LLMs such as Gemini, Cohere or any other with streaming functionality.

Tasks:

1. Backend:

- Simple backend using Express.js (using a backend/ai week boilerplate).
- Integrate the chosen free LLM (Gemini/Cohere, etc) for text generation. OpenAI's GPT is allowed too.
- Create endpoints for handling chat requests and streaming responses using three layer architecture (controller, service, router)

2. Frontend Setup:

- Simple frontend using React/Next.js.
- Implement a chat interface to send user messages to the backend and display responses.

3. Streaming Functionality:

- Implement real-time streaming of LLM responses from the backend to the frontend.

4. Database:

- Set up a database to store chat history.
- Implement automatic synchronization of chat data between the backend and the database.

Levels:

1. Level 1: Basic ChatGPT Clone

- Ensure the LLM request works fine and retrieves a response.
- Display the response in the chat interface.

2. Level 2: Streaming Functionality


- Implement real-time streaming of LLM responses.
- Ensure the frontend displays streaming responses dynamically as they are received from the backend.

3. Level 3: Database storage

- Set up a database (e.g MongoDB with mongoose orm or PostgreSQL with Prisma orm) to store chat history.
- Implement automatic synchronization of chat data between the backend and the database.

- Ensure chat history is persisted and can be retrieved upon request.

Setup:

- Fork <https://github.com/effuone/websockets-example> 
- Remove live-coding-specific functionality (e.g roadmaps, JSON streaming functionality)
- Submit to AirTable (available at Notion)