

ChatGPT Clone

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ASE 285

Project Description

- ChatGPT-like web app: start chats, send messages, receive AI replies
- Built with React frontend + Node/Express backend
- Real-time messaging using WebSockets (Socket.IO)
- Conversation history + session support

Problem Domain & Motivation

AI APIs alone are not user-friendly for everyday users

Many basic demos don't support sessions/history or real-time updates

This project matters because it practices:

- real-time communication
- persistence + state management
- third-party API integration
- deployment readiness

Features and Requirements (Sprint 1)



React chat UI (sidebar + chat window + input)



WebSocket connection between client and server



Session management (create session + load history + persist session)



End to end messaging (send update → conversation → display)

Features and Requirements (Sprint 2)

OpenAI integration (server calls OpenAI, returns AI response)

Conversation management
(delete/clear)

Deployment (build + run deployed version)

Standalone mode (remove Express;
client calls OpenAI directly)

Architecture



React Client \leftrightarrow WebSockets
 \leftrightarrow Express/Node Server \leftrightarrow
OpenAI API



Session ID + history
persisted on client
(IndexedDB/local storage)



Data Model



Session: sessionId, conversations[]



Conversation: conversationId, title, messages[]



Message: messageId, sender(user/ai), content, timestamp

Testing

- Manual tests of key flows:
 - new chat/session creation
 - send/receive messages
 - AI response shows correctly
 - switching sessions
 - persistence after refresh

Roles and Responsibilities

- **Individual Project (Solo Developer):**
 - planning + requirements
 - frontend UI
 - backend + real-time layer (if used)
 - OpenAI integration
 - testing + deployment

Links

- GitHub Repository: <https://github.com/dionabou/ase285-chatgpt-clone>
- Project Page:
<https://nku.instructure.com/courses/87378/pages/individual-project-nabou-diouf>
- Progress Page:
<https://nku.instructure.com/courses/87378/pages/individual-progress-nabou-diouf>



Thank you