

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
 - real-time updates

This project matters because it practices:

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

Features & Requirements (Sprint 1)

- React chat UI
(sidebar + chat window + input)
- WebSocket connection
(client server)
- Session management
 - create session
 - load history
 - persist session
- End-to-end messaging
 - send update → conversation → display

Features & 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 (WebSockets)
- Express/Node Server
- 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)

Testing

Manual tests of key flows:

- new chat/session creation
- send/receive messages
- AI response shows correctly
- switching sessions
- persistence after refresh

Roles & 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