

Setup and Usage Documentation

Setup Guide

- 1) Download or clone the repository
- 2) Install dependencies
 - a) Frontend
 - Navigate to the client directory and install the necessary dependencies:
cd client
npm install axios cookie socket.io-client
 - b) Backend
 - Navigate to the server directory and install the necessary dependencies:
cd server
npm install express mongoose bcrypt cors dotenv jsonwebtoken nodemon socket.io openai(optional)
- 3) Configure environment variables
 - a) Frontend

Create a .env file in both client and server directories and add your environment variables.

SERVER_URL=http://localhost:8080
 - b) Backend

MONGODB_URI=MongoDB uri (atlas)
TOKEN_SECRET=jwt token
*OPENAI_SECRET_KEY=openai secret key
- 4) Start and Development Servers
 - a) Frontend

cd client
npm run dev
 - b) Backend

Open a new terminal
cd server
npm run dev
- 5) Access the Application

Open your browser and navigate to <http://localhost:3000> to access the chat application.

Dependencies and Libraries

Frontend

1. **Next.js:** For serverside rendering and routing. It optimizes the performance and SEO of application.
2. **React:** A library for building user interfaces, allowing for component-based development.
3. **Socket.io-client:** To enable real-time communication between the client and server.
4. **Axios:** For making HTTP requests to the backend API.
5. **Cookie:** For handling cookies, mainly for user session management.

Backend

1. **Express.js:** A web application framework for Node.js, providing a robust set of features for building APIs.
2. **Mongoose:** An ODM (Object Data Modeling) library for MongoDB and Node.js, making data interaction easier.
3. **Socket.io:** For enabling real-time bidirectional communication between the client and server.
4. **Jsonwebtoken:** For implementing authentication using JWT (JSON Web Tokens).
5. **Bcrypt:** For hashing passwords to ensure security.
6. **Nodemon:** A tool that helps develop **Node.js** applications by automatically restarting the server when file changes are detected.
7. ***OpenAI:** Used for AI functionalities within the chat application.

Other Tools

1. **dotenv:** For managing environment variables, keeping sensitive information secure.
2. **cors:** For enabling CrossOrigin Resource Sharing, allowing the frontend to communicate with the backend.

*AI chat couldn't test because, my openai api key tokens over.