Chatbot Project Documentation

**Project Overview**

This project is focused on building a chatbot using React with OpenAI integration. The chatbot will utilize OpenAI's GPT model to generate responses to user input. Additionally, Google login functionality will be added to authenticate users.

**Technologies Used**

1. React.js: Frontend library for building the user interface.  
2. OpenAI API: For integrating GPT-based responses.  
3. Google Login API: For enabling user authentication via Google.

**Features**

1. Chat Interface: A conversational UI where users can interact with the chatbot.  
2. OpenAI Integration: Uses OpenAI's GPT model to provide intelligent and relevant responses.  
3. Google Login: Users can sign in using their Google account to save their interaction history.

**Setup Instructions**

1. Clone the repository:  
 git clone <repository\_url>  
  
2. Install dependencies:  
 npm install  
  
3. Set up OpenAI API key and Google API credentials in the environment variables.  
  
4. Run the application:  
 npm start

**Google Login Integration**

1. Install the Google Login package:  
 npm install react-google-login  
  
2. Obtain client credentials from the Google Developer Console.  
  
3. Integrate the Google Login button in the chatbot UI.

**Conclusion**

This chatbot project offers an engaging user experience with seamless integration of OpenAI's GPT and Google login functionality. It is designed to be scalable and can be extended with additional features.

**Routes**

1. /api/chat - POST: This route handles user input and fetches a response from the OpenAI API.  
 - Request Body: {"message": "User input"}  
 - Response: {"response": "AI-generated response"}  
  
2. /api/login - GET: This route handles Google login and authenticates the user.  
 - Request: Google OAuth token  
 - Response: {"user": {"id": "123", "name": "John Doe"}, "token": "jwt\_token"}  
  
3. /api/logout - GET: This route handles user logout and token invalidation.  
 - Request: None  
 - Response: {"message": "Logged out successfully"}

### \*\*Project Routes and Structure\*\*

| Route | Purpose | Access Level |

|--------------------|--------------------------------------|--------------------|

| / | Home or landing page | Public |

| /login | Login page for Google authentication | Public |

| /chat | Chatbot interface | Authenticated users |

| /profile | User profile and settings | Authenticated users |

| /logout | Logout page or redirect to /login | Authenticated users |

| /admin | Admin dashboard (optional) | Admin users |

| /error | Error page for handling bad routes | Public |

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