

AI CHATBOT PROJECT - SUMMARY REPORT

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OVERVIEW

This project is a full-stack conversational AI chatbot that uses Google's Gemini AI model to provide context-aware responses to users.

- Real-time chat interface with typing indicators and smooth animations
- Context-aware conversations - the bot remembers what you said earlier
- Beautiful purple gradient design that works on all devices
- Rich text formatting with bold text, lists, and proper line breaks
- Session management allowing multiple users simultaneously
- Clear chat functionality to start fresh conversations
- Secure API key management using environment variables

- Backend: Node.js with Express.js

- AI Model: Google Gemini 1.5 Flash

- Frontend: HTML5, CSS3, Vanilla JavaScript

- Key Dependencies: express, dotenv, @google/generative-ai, cors

- Architecture: RESTful API with session-based state management

- Security: Environment variables, .gitignore protection

- Conversation History: Last 20 message pairs per session

- Responsive: Mobile, tablet, and desktop compatible

API Endpoints:

- GET /api/health - Server status check
- POST /api/chat - Send messages and get AI responses
- POST /api/clear - Reset conversation history