

AI Recipe Generator — Project Summary

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Project Overview:

The AI Recipe Generator is a mobile application built with React Native (Expo) and a Node.js + Express backend.

Users enter ingredients, and the app uses the OpenAI API to generate a complete recipe including:

- Title
- Summary
- Ingredients list
- Step-by-step instructions

(The app also includes a feature that generates three similar AI-powered recipes based on the original dish.)

Technologies Used:

- Frontend: React Native, Expo
 - Backend: Node.js, Express
 - AI: OpenAI Responses API
 - Version Control: Git, GitHub
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Work Breakdown:

This was an individual project. I designed and built the entire application myself, including:

- Frontend user interface
 - Backend API routes
 - OpenAI integration
 - Debugging and testing- Git/GitHub project setup
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Challenges Encountered:

1. Parsing JSON From OpenAI:

The API sometimes returned recipes wrapped in code fences (```json ... ```), which caused JSON parsing to fail. I fixed this by cleaning the AI output and removing formatting before parsing it.

2. Local Network Issues With the Backend:

Because the backend runs locally and the phone accesses it over WiFi, the request failed whenever my computer's IP address changed on campus WiFi. I had to repeatedly check my current LAN IP and update the fetch URL so the mobile app could reach the server.

3. GitHub Secret Scanning Blocking Pushes:

GitHub detected my .env file containing my OpenAI key and blocked my push for security reasons. I removed the key from Git history, added .env to .gitignore, and re-pushed safely.

4. Multiple Node Servers Running:

Sometimes the backend port (3000) stayed occupied due to a previous server still running in the background. I fixed this by killing the servers and restarting the server cleanly.

What I Learned:

- How to connect a mobile app to a backend server
- How to handle AI-generated data safely
- How to debug network issues between devices
- How to organize and push a full-stack project to GitHub
- How to handle environment variables and secret protection

Links:

GitHub Repository: <https://github.com/spartannz/ai-recipe-generator.git>