

CPSC 304 Project Cover Page

Milestone #: 3

Date: 10.25.2024

Group Number: 107

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

Brief Summary of Project

The database will provide functionality to store, retrieve, and manage various recipe-related data. Users can look up histories for recipes that have been searched using AI and saved to the database, filter recipes by cuisine, category, or dietary restriction, and receive suggestions that meet their health and allergen requirements.

Tasks

Week-by-Week Schedule

Week 1: Project Setup and Planning

Goals:

- Set up the project structure using Next.js for both frontend and backend.
- Plan the database schema and API design, including ChatGPT API integration.

Keisuke (Frontend):

- Set up the Next.js app router for the frontend.
- Create initial pages and routing setup (Home, Recipe List, Recipe Detail).

Yuto & Soki (Backend):

- Set up Next.js API routes for backend logic and the ChatGPT API integration.
- Design the database schema (tables for Recipes, Ingredients, Users, etc.) in PostgreSQL.
- Collaborate with Keisuke on defining API contracts (including ChatGPT-powered features).

Week 2: Core Structure Implementation

Goals:

- Implement core structure for the frontend and backend.
- Begin integrating ChatGPT API into backend logic for dynamic responses.

Keisuke (Frontend):

- Implement layout components (header, footer, sidebar).
- Set up state management (React Context) to manage recipe data.
- Create static pages for recipe browsing (using mock data).

Yuto & Soki (Backend):

- Implement Next.js API routes for basic functionality and connect to ChatGPT API:
 - Yuto: Focus on User and Recipe routes (CRUD operations).
 - Soki: Focus on Ingredient and Allergen routes (CRUD operations).
- Begin integration of ChatGPT API for generating recipe suggestions or responses based on user input.
- Set up the PostgreSQL database and establish connections to the backend.

Week 3: Backend Features and ChatGPT API Integration

Goals:

- Complete backend API routes and connect them to the frontend and database.
- Finalize integration of ChatGPT API.

Keisuke (Frontend):

- Implement forms for adding and editing recipes and ingredients.
- Fetch data from the backend API routes and display it in the frontend.
- Start integrating dynamic data from the backend into the pages, including ChatGPT-powered responses.

Yuto & Soki (Backend):

- Continue API development:
 - Yuto: Implement routes for RecipeSteps and NutritionFact.
 - Soki: Implement routes for Category, Cuisine, and DietaryRestriction.
- Finalize integration of ChatGPT API to enhance features (e.g., generating recipe suggestions, answering recipe-related queries).
- Test ChatGPT API responses and integrate them into relevant API routes.
- Ensure proper API integration with PostgreSQL for data retrieval and storage.

Week 4: Frontend Features and Backend Finalization

Goals:

- Complete the implementation of all features (frontend and backend).
- Perform internal testing, especially of the ChatGPT API integration.

Keisuke (Frontend):

- Finalize UI components and integrate ChatGPT-powered suggestions (e.g., display dynamically generated recipe suggestions or answers).
- Implement search and filtering features, with ChatGPT providing smart suggestions or insights.
- Ensure full integration of API routes, ChatGPT responses, and error handling.

Yuto & Soki (Backend):

- Finalize API development:
 - Yuto: Ensure all routes for User and Recipe are fully functional and integrate ChatGPT responses.
 - Soki: Ensure all routes for Ingredients and other entities are bug-free.
- Test ChatGPT API integration extensively, ensuring response accuracy and performance.
- Perform optimizations for both API and database interactions.

Week 5: Testing, Debugging, and Deployment

Goals:

- Conduct end-to-end testing, fix any remaining issues, and deploy the application.

Keisuke (Frontend):

- Perform UI testing and verify ChatGPT-powered suggestions and interactions.
- Fix any remaining frontend bugs and optimize the app for production.
- Prepare the app for deployment.

Yuto & Soki (Backend):

- Perform comprehensive testing of API routes, including the ChatGPT API and PostgreSQL integration.
- Fix any remaining backend bugs and ensure smooth deployment of the backend and ChatGPT integration.
- Prepare the backend for deployment, including ChatGPT API configuration.

End of Week 5

PI integration using a platform like Vercel, connected to the PostgreSQL database.

- Final Testing: Conduct final testing to ensure smooth operation of every feature.