

Final Project Idea: RECIPE GENERATOR

- a. The user will be able to enter input
- b. That input could be used to query a database
- c. Calls will be made to a gen AI API for text and images
- d. Gen AI output will be returned and displayed to the user

Our web application will have the capability to generate personalized recipes for specific dishes based on user input. The core functionality of our application will involve working with the ingredients available in the user's kitchen, providing customized choices to match their available ingredients and cooking resources. Furthermore, it will excel in suggesting the purchase of missing ingredients by identifying the nearest store to the user's location. To develop the visual and descriptive experience, we will make calls to the Gen AI API for the generation of images and text related to the ingredients and dishes.

Fitness Page:

- e. The user will be able to enter input
- f. That input could be used to query a database
- g. Calls will be made to a gen AI API for text and images
- h. Gen AI output will be returned and displayed to the user

There would be another web page for a fitness/health option. It would work the same as the first webpage, receiving a user input of ingredients to provide customized choices. However, it will provide healthy choices and substitutions for the ingredients to have less calories, more protein, etc. As well as providing directions to the nearest store for said ingredients. To develop the visual and descriptive experience, we will make calls to the Gen AI API for the generation of images and text related to the ingredients and dishes.

Recipe Generator

- i. The user will be able to enter what recipe they want
- j. That input could be used to query a database
- k. Calls will be made to a gen AI API for a list of ingredients and recipe
- l. Gen AI output will be returned and displayed to the user

There would be a third function for the web app that works as the complement to the main function of the app. Instead of the user selecting which items they have and then generating a recipe from that. We would implement the reverse where the User inputs a dish they would like and then the app would provide ingredients and a recipe to create that recipe. Possibly utilizing the same logic of the first two pages where the user can decide how health conscious the recipe is and could even provide location of the nearest grocery store to purchase said ingredients.

Drink Recipe Generator:

In addition to the main meal recipe generation, our project will include a feature that allows users to input the ingredients or items they have on hand to generate a complimentary drink recipe. This feature enhances the overall culinary experience by providing users with beverage options that pair well with their selected meal.

The users will be asked to input the beverage components they have available, such as fruits, water, milk, juices etc then the database will be queried based on the user's input to retrieve relevant complementary drink recipes. After which, Gen AI will be utilized to generate recipe

variations based on user input and database queries and the output generated will be textual drink recipes along with images to accompany each recipe.

Quantity calculation according to portions.

The user will have the option to choose the amount of dishes he wants according to his needs. In this way, another page will generate the necessary quantities for each recipe and its corresponding ingredients. The main objective is to waste as little food as possible and use the ingredients for future cooking. Accompanied by a calorie counter for portions.

- The user will have control of his caloric consumption.
- The user will be able to calculate the portions according to the ingredients.
- There will be alternatives according to the ingredients available in each kitchen.