Recipe Generator App

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Description

This app allows users to select ingredients they have at home, such as items from the fridge, pantry, or vegetable and fruit baskets, and receive a variety of recipe ideas.

Interest Area of Coverage

- Culinary Recipes
- Artificial Intelligence

*The Spoonacular API used is integrating AI and ML.

Requirements

- **Req1:** Enable users to introduce comma-separated ingredients from their house (fridge, pantry, fruits, vegetables).
- **Req2:** Allow filtering recipes by meal type (breakfast, lunch, dinner, dessert).
- **Req3:** Allow filtering recipes by dietary restrictions (vegetarian, vegan, gluten-free, none)
- **Req4:** Display suitable recipes based on user requirements.
- **Req5:** Display details about the recipes, including title, picture of the recipe, preparation time, number of servings, dietary information, calories per serving and link to the recipe.

Technical Specifications

This project will be implemented in Python and will use the *Spoonacular* API for recipe recommendation functionality, and the *Streamlit* library for the web interface of the application.

Main Procedure

The main procedure involves collecting user input, processing the input data through a recipe suggestion API, fetching the data from the generated results and displaying a list of recipes based on the user's selected ingredients and preferences. The Spoonacular API facilitates recipe suggestions based on user-provided input, while the Streamlit library is utilized to design and manage the user interface, ensuring a seamless and interactive experience between the program and its users.

Main Points

- **Interface:** The st.setPageConfig() and st.markdown() create the interface of the application.
- **Recipe Information:** The main function collects the user preferences.
- **Recipe Fetching:** Function getRecipes() is used to connect to the API using the API Key, send a request based on the preferences the user inputs, and receive a response which will then be converted into a JSON File .
- **Recipe Suggestion:** The main function will extract from the response received the necessary information and will display it on the screen.

1 Test Cases

1.1 Input

- **Ingredients:** salmon
- **Dietary Restriction:** None
- **Meal Type:** Dinner

1.1.1 Output

- Thai Street Vendor Salmon Skewers
- Maple and Mustard-Glazed Salmon
- Salmon on Kiwi & Lemon Puree
- Salmon Caesar Salad

- Baked Lemon Salmon
- Cedar-Planked Salmon With Mustard Dill Sauce
- Salmon In Banana Leaf
- Salmon & Vegetables En Papillote
- Salmon Frittata
- Salmon Quinoa Risotto
- Salmon and Broccoli Crepes
- Salmon with roasted vegetables
- Salmon and Brown Rice Eggrolls
- Salmon Butternut Squash Corn Chowder
- Salmon Amaranth Burgers with Radish Slaw
- Salmon with Lime Crust, Peas, and Sweet Potatoes
- Salmon With Orange Salsa and Pomegranate Glaze

1.2 Input

- **Ingredients:** egg, bread, tomato
- **Dietary Restriction:** None
- **Meal Type:** Any

1.2.1 Output

- Black Olive & Tomato Bread

1.3 Input

- **Ingredients:** omelette
- **Dietary Restriction:** None
- **Meal Type:** Breafast

1.3.1 Output

- Torta (Filipino Omelet)
- Duck Egg Omelette With Caviar and Sour Cream
- Fresh Herb Omelette
- Zucchini Chicken Omelette
- Spinach Mushroom Omelette with Parmesan

1.4 Input

- **Ingredients:** salad, cucumber, tomato, feta
- **Dietary Restriction:** Vegetarian
- **Meal Type:** Lunch

1.4.1 Output

- Greek Side Salad
- Salade Grecque
- Tomato, Cucumber & Onion Salad with Feta Cheese: Real Convenience Food