Exercise 2.7
Data Analysis and Visualization in Django

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Subject: Implement Search for Recipes

Objective

- Take some time to think of what you want users to search for, the criterion for search, and format of output.

I would like users to have the search functionality to type any keyword and match it with recipe names, ingredients, or descriptions. The added functionality of autocomplete to offer suggestions would also be great. Implementing AJAX is something I can look into in the future due to complexity and time constraints of the project. The search criteria could include ingredients, recipe name, cooking time or difficulty level. I want the result to filter similarly to my recipe list page, only including recipes matching the search criteria.

Data Analysis

Bar chart

Most used ingredients.
X-axis: Ingredient names Y-axis: Frequency of ingredient use across all recipes

Pie chart

Recipe difficulty distribution.
Show what percentage of recipes fall into each difficulty level.

Line chart

Amount of time each recipe takes to make, including prep and cook times.
X-axis: Recipe name Y-axis: Total time (in minutes)

Execution Flow

User lands on the homepage, logs in to the account, searches for recipes that include their specified ingredient, sees the plot data of the filtered recipes, changes the chart type to view more data, checks recipe details, logs out and is prompted to log back in.