

2.7: Data Analysis and Visualization with Django

Search Implementation:

Search Criteria:

Approaching this project as a potential user, there should be a few possible search criteria available for users:

1. Search by Name
2. Search by Ingredients
3. Search by max cooking time
4. Search by Difficulty
5. A combination of the above

How to Search:

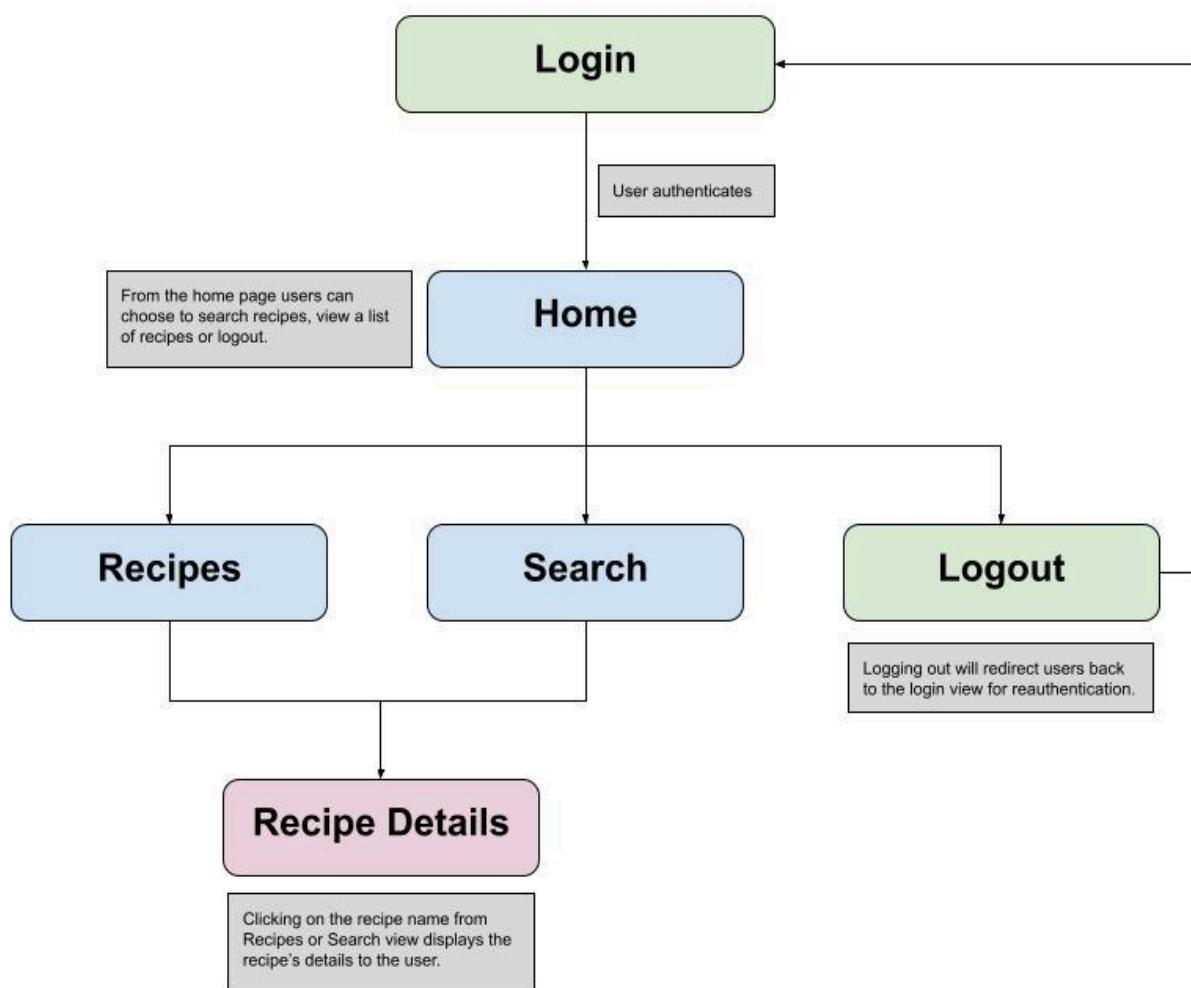
Searching by name, ingredient(s), or max cooking time should be done through an input field since the search input may vary.

Data Visualization:

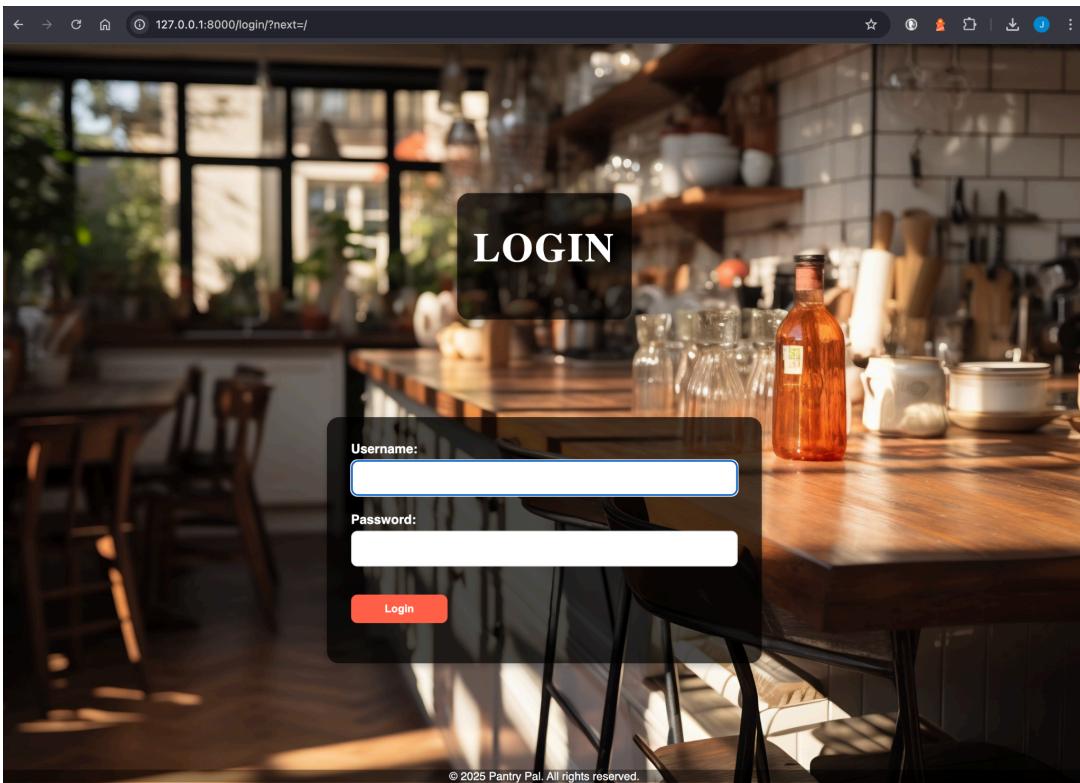
The visualization is going to be very useful to give users a bigger picture of what options are available to them. However, immediately seeing data visualization when searching for a recipe can be overwhelming to a user. With that in mind, I think the visualization should be an option for users rather than forced upon them. I believe the easiest way to approach this would be to give the user the option to show or hide the chart.

After selecting a chart type, users will then have the option to show/hide the chart from the search results. This gives the user a bit more control over their own experience within the app.

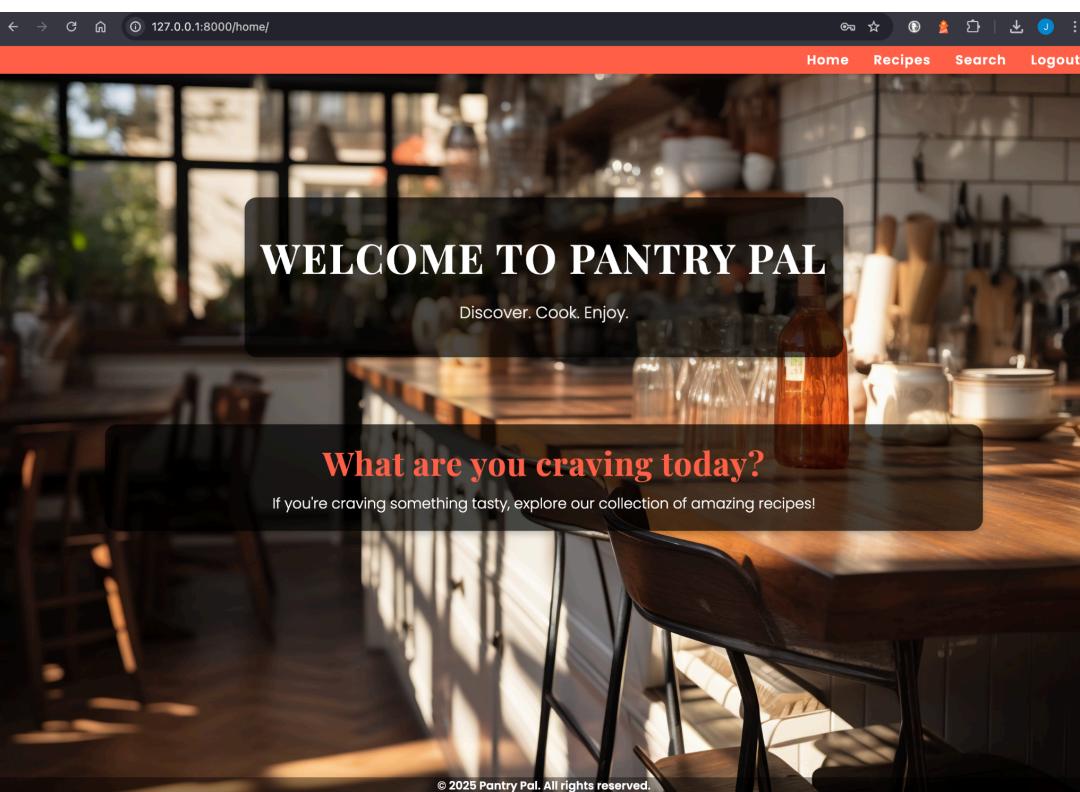
Execution Flow:



1. Login



2. Home



3. Recipes List

The screenshot shows a web browser window with a red header bar containing navigation icons and the URL "127.0.0.1:8000/list/". Below the header is a dark overlay with the title "Browse Recipes" and the subtitle "Discover a variety of delicious dishes to try today.". A grid of four recipe cards is displayed:

Recipe Name	Recipe Image
Tea	
Chicken Wrap	
Coffee	
Chocolate Chip Cookies	

At the bottom of the grid, a copyright notice reads "© 2025 Pantry Pal. All rights reserved."

4. Recipe Details

The screenshot shows a web browser window with a red header bar containing navigation icons and the URL "127.0.0.1:8000/list/1". Below the header is a dark overlay with the title "Tea". A large image of a steaming cup of tea is centered. Below the image, detailed recipe information is provided:

Name: Tea
Cooking Time: 5 min
Difficulty: Easy
Ingredients: water, herbal tea, honey
Description:

At the bottom left is a "Back" button, and at the bottom center is a copyright notice "© 2025 Pantry Pal. All rights reserved."

5. Search

The screenshot shows a web browser window with the URL `127.0.0.1:8000/recipes/`. The page has a header with links for Home, Recipes, Search, and Logout. A search bar titled "Search for Recipes" is centered over a blurred background image of a kitchen. Below the search bar is a table with five columns: name, picture, ingredients, cooking_time, and difficulty. Two rows of data are visible: one for "Tea" and one for "Coffee". Each row includes a small image of the respective drink. The "Tea" row lists "water, herbal tea, honey" as ingredients, a cooking time of 5 minutes, and an "easy" difficulty level. The "Coffee" row lists "water, coffee grounds, creamer" as ingredients, a cooking time of 5 minutes, and an "easy" difficulty level. A "Search" button is located at the bottom right of the search bar area. A "Show Chart" button is visible in the bottom right corner of the main content area.

name	picture	ingredients	cooking_time	difficulty
Tea		water, herbal tea, honey	5	easy
Coffee		water, coffee grounds, creamer	5	easy

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This screenshot is similar to the previous one, showing the same search interface and recipe table. However, it includes a chart titled "Cook Time by Recipe" overlaid on the right side of the table. The chart is a bar chart with "Cooking Time (min)" on the y-axis (ranging from 0 to 5) and "Recipe Name" on the x-axis (with categories for Tea and Coffee). Both bars reach a height of 5, indicating a cooking time of 5 minutes for both Tea and Coffee. A "Hide Chart" button is located at the bottom right of the chart area.

name	picture	ingredients	cooking_time	difficulty
Tea		water, herbal tea, honey	5	easy
Coffee		water, coffee grounds, creamer	5	easy

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6. Logout

