Recipe Recommendation Tool

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Problem Statement and Opportunity

- Optimizing a diet is a very tedious and time consuming process.
- Maintaining the results achieved from a diet often means counting calories and planning meals for the long term.
- A recipe recommendation system is a helpful tool to plan a diet to reach or maintain a certain goal.
- The opportunity with this tool is to save time and to provide an array of options that the user can explore to optimize their diet.

Proposal Using Data Science

- The goal is to build a recipe recommendation tool that provides relevant options based on ingredients and calories searched.

- Recommendation systems presents a list of items on which a user might be interested based on their preferences.

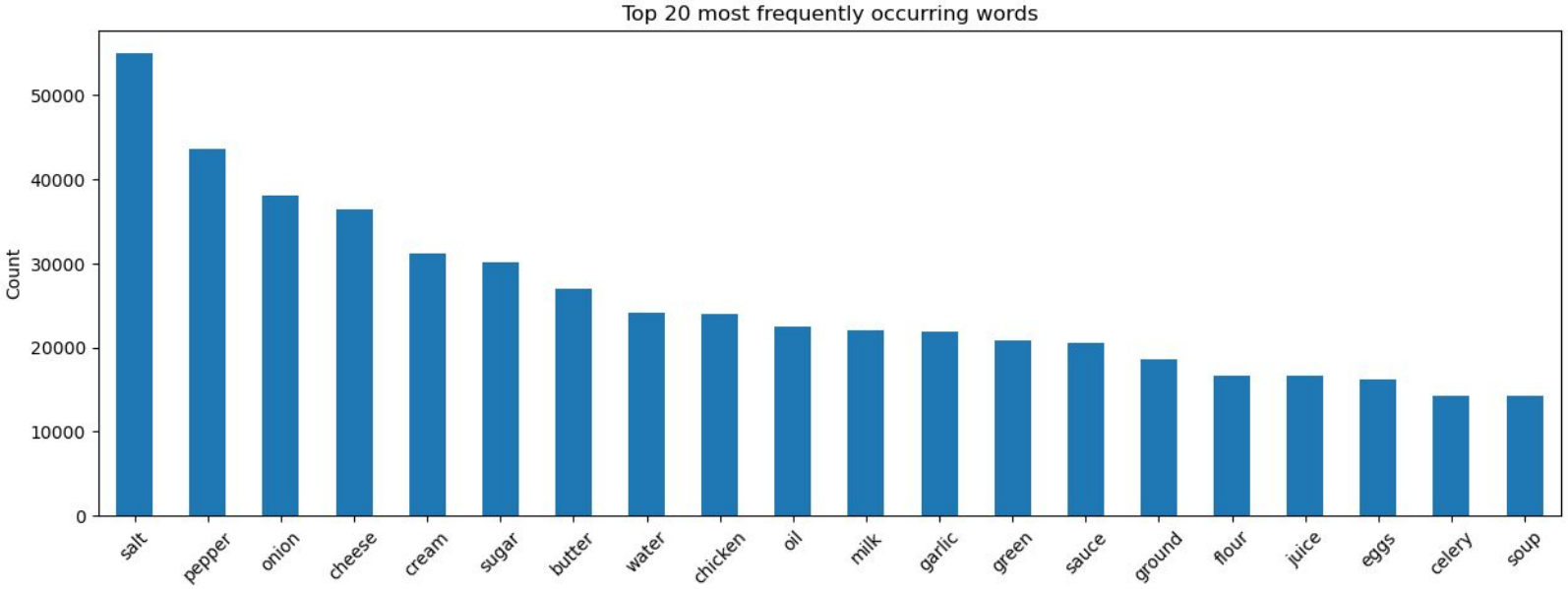
Potential Impact

- The main impact would be in terms of time saved researching ideas across different sources.

- Potential cost savings as the user can input ingredients that they already have on hand.

Dataset: Description and Findings

- Mostly text data.
- 105,543 unique recipes with 28,027 unique ingredients.
- Average number of ingredients per recipe is ~8.



Dataset: Concerns

- Nutritional value would need to be extracted and preprocessed from the measures in the list of ingredients (issues with regular expressions as there are many combinations in which measures appear (fractions, mixed fractions, integers, decimals).

- Mapping unique ingredients from this dataset to the ingredients list from the USDA dataset could present issues in cases where they have different naming conventions.

- Currently recipes are not labeled as ‘breakfast’, ‘lunch’, ‘dinner’, ‘dessert’.

Next Steps

- Classify recipes as breakfast, lunch, dinner and dessert.

- Attempt extracting nutritional value information (i.e. protein, fat, sugar, calories) using string splits and calculate a rough estimate of nutritional values. I will probably attempt web scraping the ‘AllRecipes’ website in case I am not able to achieve that using this dataset.