

Intelligent Zero Waste Recipes

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1 Dataset and Objective

It is recorded that the world wastes approximately 2.5 billion tons of food each and every year. This project seeks to mitigate this issue by posing the following objective:

Objective. *In an individual household, our primary objective is to identify recipes that prioritize ingredients with approaching expiration dates. We will also consider the following secondary objectives:*

- *Adding a feature which recommends recipes while minimizing the cost of additional purchases.*
- *Adding a feature which considers the average rating of a given recipe.*
- *Adding a feature which takes into account the users' preferred cuisines.*

Our dataset consists of various recipe aggregates which are listed below:

- Recipe Ingredients Dataset (50k Recipes)
- Food.com Recipes and Interactions (180k Recipes)
- Eight Portions - Recipe Box (125k Recipes)

2 Stakeholders

The United States is estimated to discard more food than any other country in the world with nearly 60 million tons of waste each year. This equates to roughly 40 percent of the entire food supply and is the single largest component taking up space inside of landfills. This equates to a loss of approximately 218 billion dollars per year. Additionally, the water and energy it takes to produce food globally contributes to 11 percent of greenhouse gas emissions.

Since we are seeking to provide various recipes to our consumers, our primary stakeholder would be for individual households. By implementing our intelligent zero waste recipes, we will help achieve the following performance indicators:

- Reduce overall waste production and greenhouse gas emission by prioritizing ingredients by their expiration date.
- Minimize consumer spending by increasing the utilization of ingredients.