~DESSERT.FLAVOR.EVALUATOR~

I'll help you decide what dessert to make next!

Safia Khouja, Spring 2020

Motivation

I spent the first month of quarantine baking very frequently, sometimes as often as three or four times a week. One day, I realized that I rarely devised ideas for desserts on my own – instead, I found inspiration on Instagram or from friends who baked (Thomas Kuo).

As a result, I decided to design an app that empowers dessert-lovers like me to develop creative flavor combinations that can be explored in their own kitchens! Long-gone are the days of choosing between flavors like vanilla or chocolate. With the help of my app, dessert-lovers are inspired to bake and cook impressive new creations that combine classical flavors, refreshing fruits, and exciting spices.

Demo

Data

1. Kaggle dataset of 7,000 dessert recipes from Epicurious.com
    - 🍭 Dessert name
    - 🍭 List of flavors in the dessert
2. Internet Archives dataset of 30,000 Epicurious recipes
    - 🍭 Recipe name
    - 🍭 Average rating
    - 🍭 Number of reviews
    - 🍭 Epicurious.com URL

Joined the datasets on Recipe Name for a final dataset of 6500 desserts!

Model

- Prediction:
  - 🍭 Model: gradient Boosted Decision Tree (XGBoost)
  - 🍭 94 one-hot-encoded flavor variables
  - 🍭 Testing $r^2 = .6$

- Recommendation:
  - 🍭 Algorithm: popular, filtered so that recipes with less than 6 reviews will not be recommended

Insights

Rating Prediction
Recipe Recommender

- What kind of value does each feature add for the user experience?
- How do the features impact the app performance, specifically latency?

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Thank you!

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