Capstone Progress

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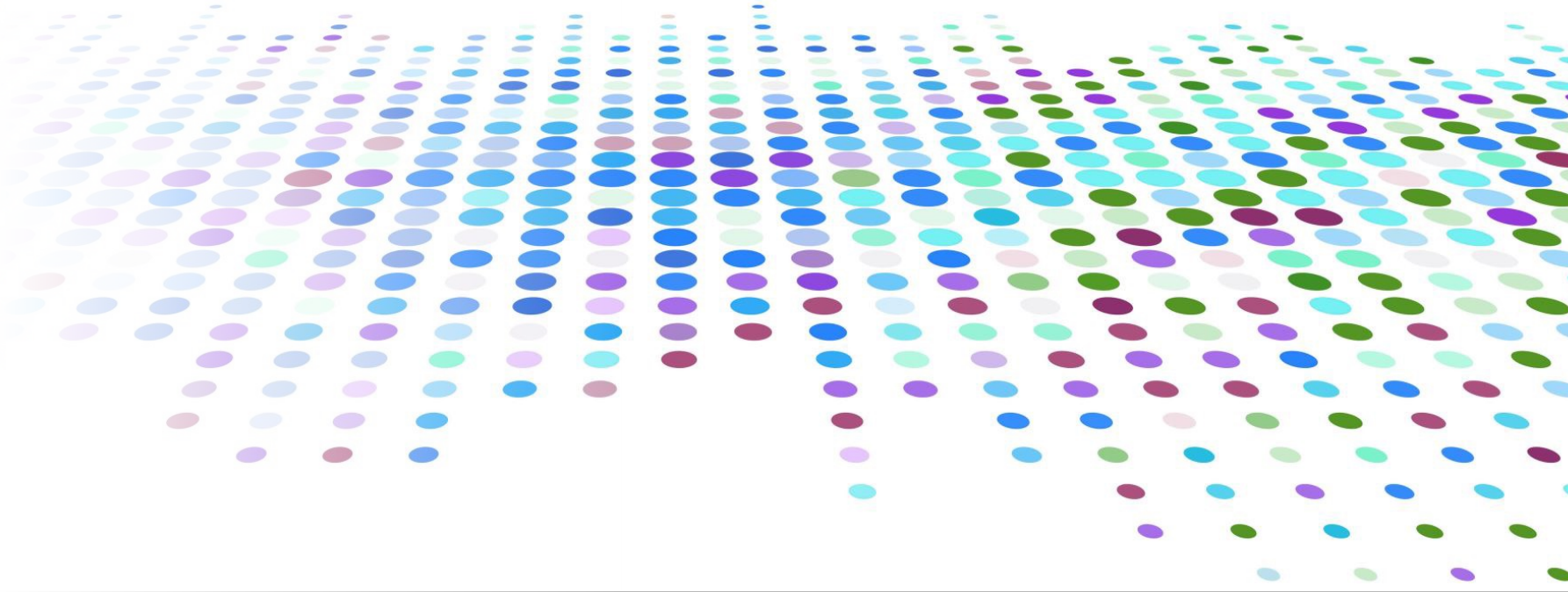


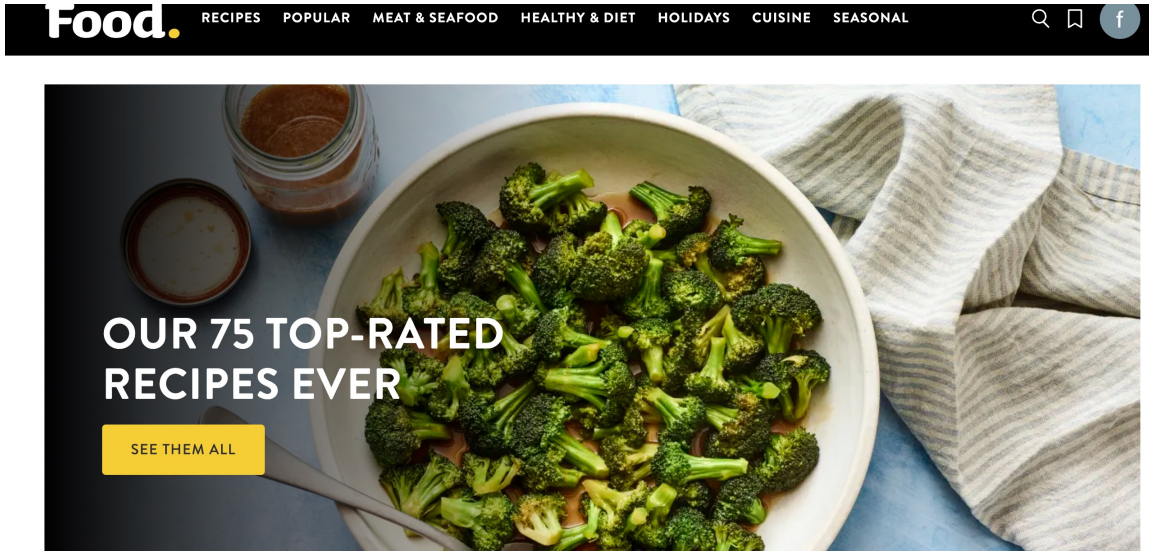
Introduction

- Have you ever stood in front of an open fridge wondering – what do I cook for dinner today?

Food Recipe Recommender System

Data Collection

kaggle



Data Description

Challenge:

- Columns definition
- Data type

RECIPE TABLE						
Recipe Id Recipe name	Author Id Author name	Time: Preparation, Cooking, Total	Image	Nutritional Factors: Fat, Sodium	Texts: Description, Category, Ingredients, Keywords, and Instruction	Target: Avg Rating

Review Table					
Review Id	Recipe Id	Author Id, Author Name	Rating	Review	Date Submitted

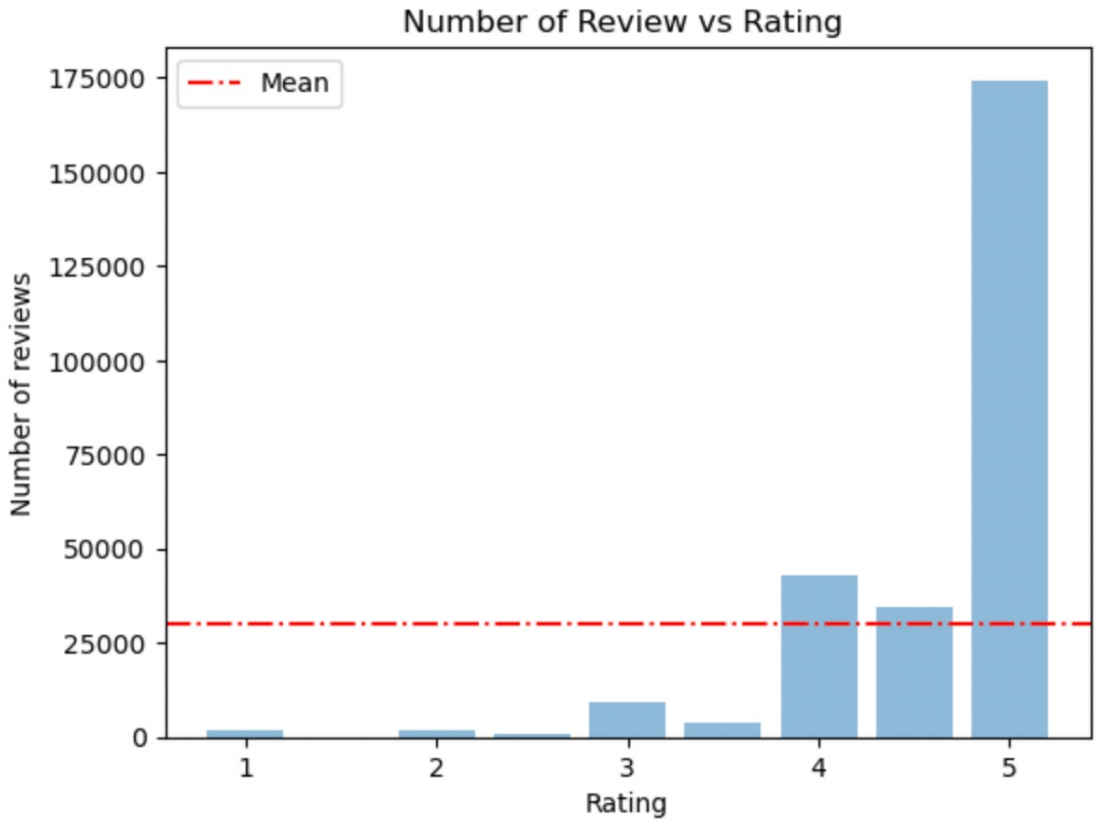
Clean-Up

- Review data

1.5M and almost clean.

- Recipe data

0.5M Data → 270K after cleaning → 190K after downsampling →Text cleaning



Classification Models

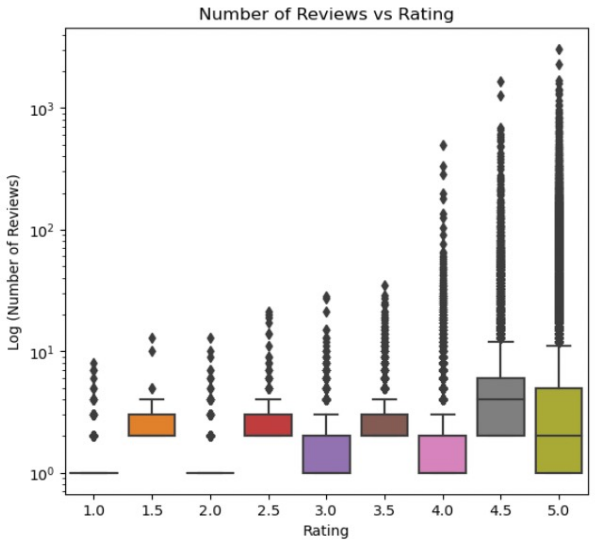
Predicting the average rating of a recipe based on its features.

KNN, Logistic Regression, Decision Tree

Several technics like normalization, PCA, hyper-parameter tuning, and feature selection have been implemented.

The model can find out 80% of recipes which are going to be low-rated.

The more a recipe receives reviews, The better the total score it might get.



Recommender System

Content-Based Recommendation

Finding the similarity between recipes based on their description, ingredients, nutritional factors, and other feature. Recommend the top-rated ones.

FunkSVD Recommendation

Using historical ratings different users gave to different recipes.

Predict ratings of all recipes for a certain user.

Recommend the top ones.