Data Visualization Final Project Proposal

Group K: Yunhong Feng, Xiaoya Wang, Hanting Lei, Jiahui Yang

Title: Trends in Restaurant Development in the US

Introduction

For our final project, we aim to provide some insightful information about restaurants in the US. We plan to analyze Uber Eats data on restaurants to explore some useful questions such as what are the trending restaurant categories and where the most popular restaurants are located across the country, etc. We will examine and divide these questions at the country level, regional level, and individual restaurant level.

Some of the graphs we plan to include are:

• Country-level: The distribution of popular restaurants and different restaurant categories across the US (map), and the change over time in the number of different types of restaurants (interactive map).

• Regional-level: For major cities like New York, Boston, LA, etc., we will create comparison graphs to show how restaurant popularity varies between these cities (bar chart, point chart), where the restaurants are located within the city (map), the most popular restaurant categories within the region (word cloud), and a list of popular foods for each category (bar chart).

• individual restaurant level: By entering the location and type of food desired, users can find the top-rated restaurant in that city and their popular dishes (interactive, map, bar chart, word cloud).

In total, we aim to create 7-8 graphs. Initially, we will showcase the popular foods and restaurants, followed by additional information on their location, dishes, and ratings. Finally, we will develop an interactive search engine to provide users with useful information based on their preferences.

Technical and Data requirements

We will utilize Uber Eats data on restaurants, available at Kaggle:

https://www.kaggle.com/datasets/ahmedshahriarsakib/uber-eats-usa-restaurants-menus/data

This dataset includes information on restaurant locations, category, rating, menus, and price range, which will suffice for our visualization needs.

Techniques: ggplot2, ggmap, interaction, Shiny