Coursera Capstone Report

(Exploring Foursquare and Zomato API)

Introduction

Whenever a user searches for a venue, they're highly interested in the best places that they can find in the area. However, it's not limited here. The user also wants to know how good the restaurant is and what price range does it fall under. This helps the user to decide which venue to choose from a given number of options. Combining the location data with the restaurant information (ratings, price and others) would surely help users make better informed decisions.

Thus, this project explores various venues in Chandigarh, India and attributes the data based on user ratings and price. To explore this information, this project involves the juxtaposition of both the Foursquare API and the Zomato API to fetch complete information of various venues. Further, the venues will be plot on the map with a specific color scheme to highlight their position and simultaneously give more information.

The target audience for such a project is twofold. Firstly, any company that wants to launch an online or mobile application through which the users can explore the city, can use the location data of venues and plot a map of the same for the users. Secondly, the people who want to explore the city can use this project to find the venue with high ratings throughout the city.

Data

The complete dataset for this project includes the location information of various venues in Chandigarh, India and the venue information (rating and others) for each venue. For fetching the location information, the project uses the Foursquare location data API and for fetching the venue information it uses the Zomato API. Once the information is aggregated, the dataset would then be used to plot information on the map as well as filter results based on ratings and price.

The dataset would include the following fields:
1. Name: The name of the venue.
2. Category: The category to which the venue belongs to. As there are two APIs, which have different set of category division, I'll keep only one category information.
3. Latitude: Describes the latitude of the venue.
4. Longitude: Describes the longitude of the venue.
5. Address: The complete address of the venue.
6. Average cost: It defines the estimated cost for a person visiting the venue.
7. Price range: Each venue is divided into separate price bands by Zomato and this range defines it.
8. Rating: The overall rating of the venue.

Steps of data aggregation:
1. The latitude and longitude values are fetched for Chandigarh.
2. Using the Foursquare API, nearby venues are fetched.
3. For each of those venues, the Zomato's search API helps to extract the closest match (the same venue itself) as the parameters are set to fetch only one result with the given latitude and longitude of the venue.
4. The data including address, average cost, price range and rating are extracted sand added to the data from the Foursquare API.

Data Source APIs:
1. Foursquare API: https://developer.foursquare.com
2. Zomato API: https://developers.zomato.com/api