Coursera Capstone Project

1. Problem

1.1 Description

Exploring venues in Pune West, India using Foursquare and Zomato API

Pune is one of the biggest IT hubs in India and Hinjewadi is an IT park, where most of the companies have their offices, belongs to the western part of Pune. Whenever a person moves to the city for a job, such a person searches for a venue in a new city, they're highly interested in the best places that the city has to offer. The person might want to know how good a given restaurant is or the price range it falls under. This extra information would help decide which venue to choose amongst the many venues in the city. Combining the location of the venues in the city with their price and rating information would surely help visitors in a city make better informed decisions about the places they should visit.

In Pune West, are many venues (especially restaurants, hotels and cafes) which can be explored. This project explores various venues in Pune and attributes the data based on user ratings and average price. To explore this information, this project involves the data from both the Foursquare API and the Zomato API to fetch complete information of various venues (including name, address, category, rating, and price). Further, a map of the venues with specific colour attributes will be plotted to highlight their position, and information about these venues. Such plots imbibe bountiful information in the form of their coloured representations and location on the map. This enables any visitor to take a quick glance and decide what place to visit.

1.2 Interested audience

The target audience for such a project is twofold. Firstly, any person who is visiting Pune, India can use the plots and maps from this project to quickly select places that suit their budget and rating preferences. Secondly, a company can use this information to create a website or a mobile application, which is updated on a regular basis, to allow individuals to the city or even expand same functionality to other places.

2. Data

2.1 Data Sources

To get location and other information about various venues in the western part of Pune, a combination of data from the 2 API sources will be used together.

1. Using the Four square's explore API (which gives venues recommendations), I fetched venues up to a range of 4 kilometres from the centre of Wakad, i.e. the heart of West Pune and their names, categories and locations (latitude and longitude) will be collected.

2. Using the name, latitude and longitude values, Zomato search API will be used to fetch venues from its database. This API allows us to find venues based on search criteria (usually the name), latitude and longitude values and more.

2.2 Data Cleaning

Data collected from the 2 data sources, will be cleaned to extract the following vital information and then be used to solve the problem.

From Foursquare API (https://developers.zomato.com/api), we will retrieve the following information for each venue:

• **Name:** The name of the venue.
• **Category:** The category type as defined by the API.
• **Latitude:** The latitude value of the venue.
• **Longitude:** The longitude value of the venue.

From Zomato API (https://developers.zomato.com/api), we will retrieve the following for each venue:

• **Name:** The name of the venue.

- **Address:** The complete address of the venue.
- **Rating:** The ratings as provided by many users.
- **Price range:** The price range the venue belongs to as defined by Zomato.
- **Price for two:** The average cost for two people dining at the place.
- **Latitude:** The latitude value of the venue.
- **Longitude:** The longitude value of the venue.