Exploring venues in Bengaluru, India using Foursquare and Zomato API

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1. Introduction

1.1 Background

Whenever 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.

Bengaluru the Silicon Valley of India is spread across a total area of 709 sq. Km. There are many venues (especially restaurants, hotels and cafes) which can be explored.
This project explores various venues in Bengaluru and attributes the data based on user ratings and average price.

To explore this information, this project involves the usage of two API's call Foursquare API and the Zomato API to fetch complete information of various venues
(Including name, address, category, rating, and price).

After Cleaning and processing the data we can plot a map with all the desired o/p.

1.2 Interested audience

The target audience for such a project is twofold:

Firstly, any person who is visiting Bengaluru, India can use the plots and maps from this project to quickly select places that suit their budget and rating preferences.

Second, anybody looking to start there startup or any food delivery services based on the comparison and map plotting can get an estimate of where and how to open there business.

2. Data Source

To get location and other information about various venues in Bengaluru, I will be using 2 API's, and then merge the relevant data from both.

Using the Foursquare' s explore API (which gives venues recommendations), I fetched venues up to a range of 4 kilometers from the center of Bengaluru and collected their names, categories and locations (latitude and longitude).

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

Given that the data from the two APIs did not align completely, I had to use data cleaning to combine the two datasets properly.

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3. Methodology and Exploratory Data Analysis

As a first step, I retrieve the venues in Chandigarh from Foursquare and Zomato APIs. I extract the location data from the Foursquare API for all venues up to a distance of 4 kilometers from the center of Chandigarh. Using this, I fetch the venue information including price and rating data from Zomato API. Using data cleaning, the dataset from the two APIs will be combined based on the venue names, latitude, and longitude values. One to one matching and careful data inspection would be used to remove any remaining outliers such as multiple venues at the same location from the two datasets. The final data will include the venue name, category, address, latitude, longitude, rating, price range, and average cost per person. Using this dataset, I begin by analyzing the top venue types that exist in Chandigarh. I will then explore the venues on maps. This will allow us to better understand the location of various venues and the places where many venues co-exist and create place worth visiting.