Insights of the venues in Hyderabad, India Using Foursquare and Zomato API

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1. Introduction

- **Initial Insight**

  India, the land of tourism and various culinary food from all around the world and the land of unique flavors. Tourism is a gamechanger for Indian food market. Millions of people from all around the world visit India to explore the monuments and as well as food. So, the tourists would like to know the relevance of the choosing which venue to decide among all the restaurants in the city. Using the combination of the relevant price and rating of the place, it makes the decisions easier for the people who visit.

  Hyderabad is a vast region composed of many sectors and having an area of 650 sq.km. Hyderabad is a place where there exist various venues including all the restaurants, hotels, cafes', Pubs, Clubs which have a wide range to explore into. The insight of the project is to explore various venues in Hyderabad and the attributes of the Data based on the average price and rating such that the decision to select the venue becomes easier. To explore a place in India, not only using the Four Square API is required but also the local Restaurant Partner Zomato, its API will be used to fetch the complete information and the ratings of the users which helps in making the task relevant and easier.

- **Target Audience**

  There exist two target audience possibilities, the initial one would be the people who live in that area such that, it gives them the area and new insights which they want to see. People who would like to concentrate on the area where the competition is less and establish their food market in that area.

2. Data

- **Data Sources**

  To retrieve the location and other information from various venues. Two APIs will be used, and the data retrieved will be combined.

  Using the Foursquare's API, the venues are fetched up to a range of 5 kilometers from the heart of the city and collected their names, categories, latitude and longitude.

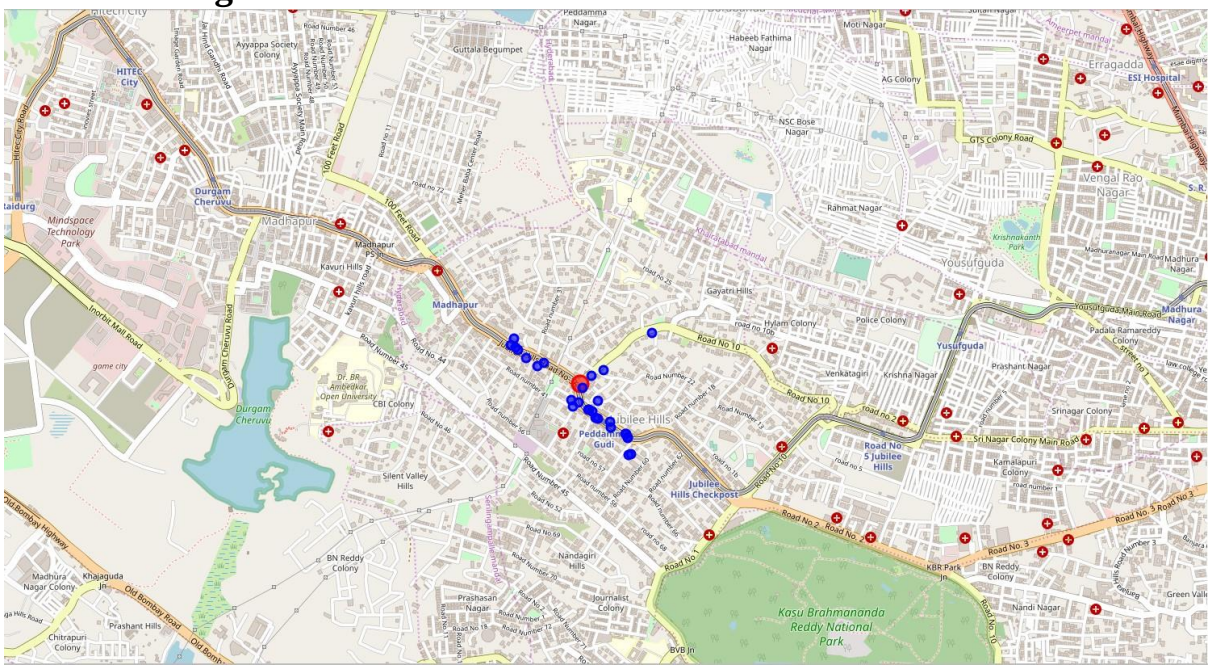
From Foursquare API the following for each venue have been retrieved:

- **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.

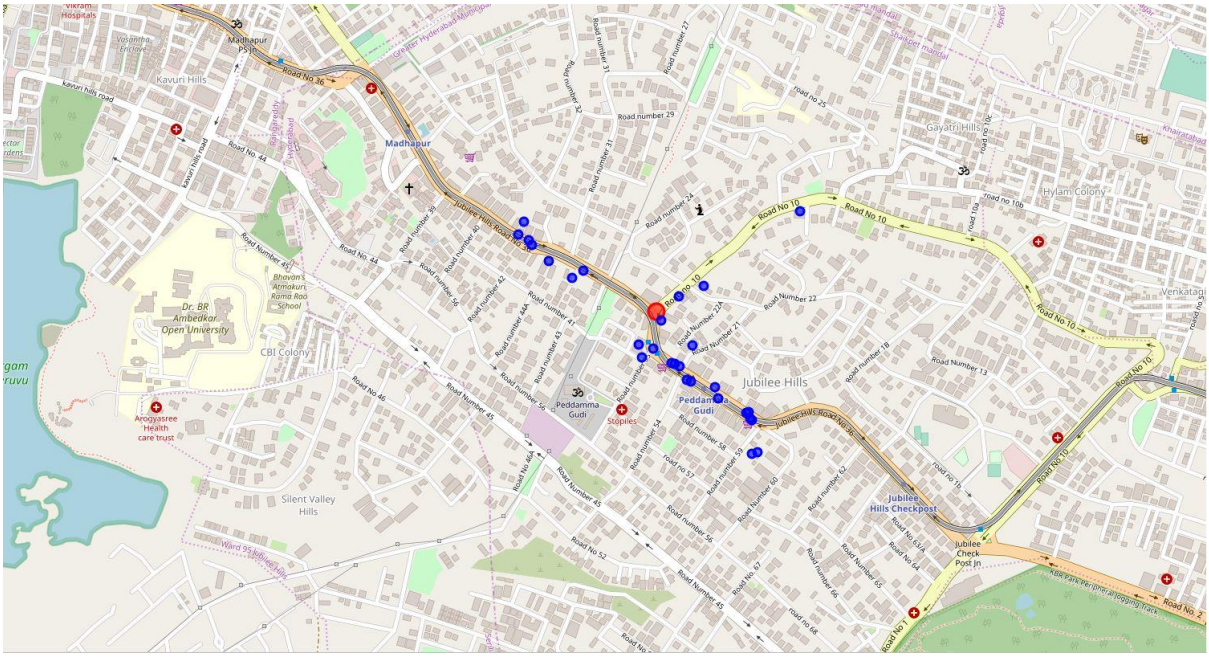
From Zomato API (https://developers.zomato.com/api), I retrieved the following for each venue:

- **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. I later convert the same to average price per person by dividing by 2.
- **Latitude:** The latitude value of the venue.
- **Longitude:** The longitude value of the venue

- ## Data Cleaning



FourSquare API Venue Map



Zomato API Venue Map

From figure 1 and figure 2, we can clearly see that some venues from the two APIs do not align with each other. There exists an offset between the two values.

There exists an offset difference of more than 0.0006 from one another. This has been updated and combined with the two data sets.

They can be categorised as follows:

1. There are venues that have specific restaurants/cafes inside them as provided by Zomato API.
2. Two locations are so close that they have practically same latitude and longitude values.

The details of the venue from category 1 and 3 can be added to the data but data from category 2 will be dropped and the final dataset will be constructed based on which the further project will be done.