The Battle of Neighborhoods of Bangalore

Case-Study for Commercial Viability of Mobile Food-Truck in the Neighborhood

IBM PROFESSIONAL CERTIFICATE IN DATA SCIENCE BY COURSERA

Capstone Project Report
submitted towards the requirement of
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This report is available at: https://github.com/khemanta/Coursera_Capstone/

1 Introduction

The present exercise aim to study the neighborhood of Bangalore Central District. Bangalore is thriving metropolis, an IT and technology hub and usually referred as the Silicon Valley of India.

In this case study, we study to address if there is a specific neighborhood which has food preferences over other? Are there neighborhood which are price sensitive? Are there any neighborhood which enjoy better quality restaurants than other? And finally some recommendation for a entrepreneurial venture to cater the need of mobile food truck and which segment and region and customer segment would be who could be targeted from commercial viability. The study is divided largely into seven parts which is illustrated below as per table of contents.

1.1 Problem Statement

Bangalore is a big metropolis. Till few decades back it was a beautiful city of people wishing to spend the time of after retirement from work. Old Bangalore which is city center has remained largely same with lot of eateries and restaurants, ice-cream parlors, cafe and pubs. But now a thriving metropolis is an IT hub.

A. The immediate objective of this exercise is to analyze and data analysis to:

1. Identify the neighborhood of city center of Bangalore.
2. Ratings of the restaurants in these neighborhoods.
3. Price sensitivity neighborhoods i.e., average cost of diner across the neighborhoods.
4. Dominant categories of food and restaurants in across neighborhoods.

B. Recommendation for opening a new restaurant :

1. Whether a mobile food truck would be good option?
2. What area of the neighborhoods the food truck should target?
3. What category of foods, which price range in which neighborhoods food truck should target?

1.2 Data Sources

For this exercise to know the neighborhoods we need geographic data. As well for food and restaurant related information. TO cater this need we rely on the the followings APIs

- Foursquare APIs for locations and neighborhoods places of interest as restaurant.

- Zomato APIs for the identified locations foods and restaurants.

- GeoPy Package for retrieving the geo-code (longitude, latitude) of the city center and neighborhoods.

1.2.1 Data from Foursquare APIs

The following data sources and attributes will be extracted from Foursquare APIs.

https://developer.foursquare.com/

```
foursquare_data_attributes = ['venue.name', 'venue.categories',
    'venue.location.lat', 'venue.location.lng']
```

- Venue name in the Neighborhood

- Group or Category of the Venue

- Geo-Code of the Venue as (lat, lng)

1.2.2 Data from Zomato APIs

The following data sources and attributes will be extracted from Zomato APIs.

https://developers.zomato.com/

```
zomato_data_attributes = ['venue', 'latitude', 'longitude',
    'price_for_two', 'price_range', 'rating', 'address']
```

- Venue of the Restaurant from that Neighborhood

- Geo-Code: (Latitude, Longitude)

- Price of Foods for Dinning of Two People

- Price Range of Foods from the Restaurant

- Ratings of the Restaurant

- Address of the Restaurant