



# The Battle of Neighborhoods of Bangalore

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

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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/](https://github.com/khemanta/Coursera_Capstone/)

# Table of Contents

<b>1</b>	<b>Introduction</b>	<b>3</b>
1.1	Problem Statement . . . . .	3
1.2	Data Sources . . . . .	4
1.2.1	Data from Foursquare APIs . . . . .	4
1.2.2	Data from Zomato APIs . . . . .	4
<b>2</b>	<b>Data Collection and APIs</b>	<b>5</b>
<b>3</b>	<b>Data Cleaning Transformation</b>	<b>6</b>
<b>4</b>	<b>Methodology: Approach and Solution</b>	<b>7</b>
<b>5</b>	<b>Data Exploration and Analysis</b>	<b>8</b>
<b>6</b>	<b>Results and Discussions</b>	<b>9</b>
<b>7</b>	<b>Conclusions and Recommendations</b>	<b>10</b>

# 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

## **2 Data Collection and APIs**

Chapter about data collection and various data APIs being used.

# **3 Data Cleaning Transformation**

Data cleaning and processing for analysis.

## **4 Methodology: Approach and Solution**

The methodology is discussed here for what analysis to be done and which technique used, like clustering. Visualization and annotations of overlaying the data on map in geo-spatial analysis.

# 5 Data Exploration and Analysis

Analysis of findings.



## 6 Results and Discussions

Results and findings will be discussed which otherwise not covered covered earlier. Here also some findings against some assumptions and hypothesis will be discussed.

## **7 Conclusions and Recommendations**

Here the conclusively what is the recommendation, would be discussed as take away points for business users of this study.