THE BATTLE OF NEIGHBORHOODS OF BANGALORE CENTRAL

A case-study for Commercial Viability of Food-Truck Restaurant in the Neighborhood of Bangalore Central

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Coursera // IBM // Data Science Capstone

Agenda

Introduction

Problem

Solution

Results

Conclusion

Introduction

Bangalore City

- Bangalore is 4th largest metropolis in India
- Metropolitan Region is spread over > 741 sqkm
- Migrant Population > 50%, Mainly Young
- Education and R&D, and IT Hub
- Silicon Valley of India
- Presence of Global Tech Giants : Google, Microsoft, IBM, SAMSUNG, GE, Infosys, TCS, etc.
- Start-Up Capital of India

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Entrepreneurial Idea

Food-Truck, a mobile restaurant. But what is guarantee of success ? Can Data Science help?

Problem

Food Truck Commercial Viability?

The Classic Problem: Which, Where, What, How, and Who ?

Location

Which neighborhood food-truck to operate?

Category

What category of food to serve?

Pricing

Who to target and How much to price?

Solution

Data Sources

Foursquare APIs

- Venue name in the Neighborhood
- Group or Category of the Venue
- Geo-Code of the Venue as (lat, lng)

Zomato APIs

- 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

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FOURSQUARE

zomato

Methodology

Data Cleaning and Transformation

Data from both sources cleaned and merged

Exploratory Data Analytics

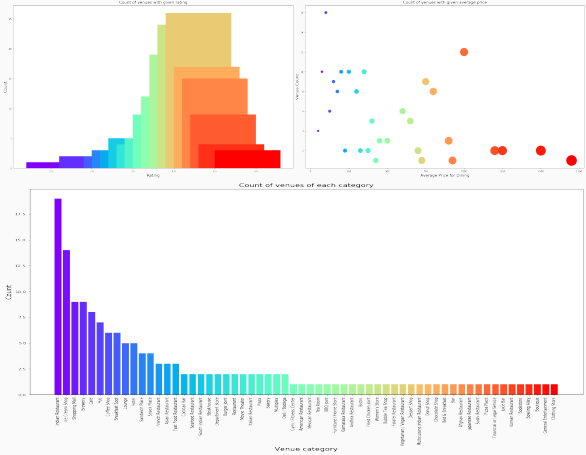
Explored the data and perform exploratory analysis

Visual Analytics

Visualized the data on geo-spatial map

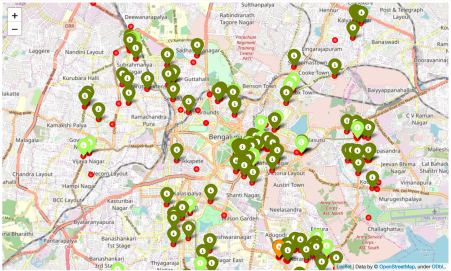
Clustering

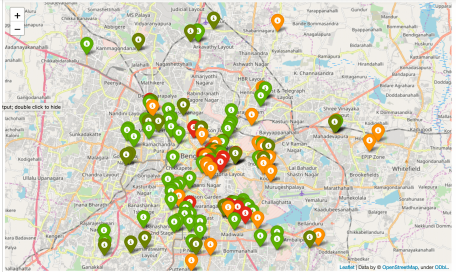
Clustering of the data for insight



Results

Results


Leaflet | Data by © OpenStreetMap, under ODbL.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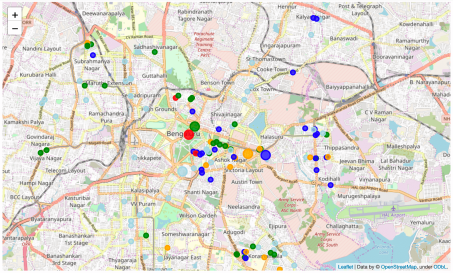
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Findings

C1

```
print("These venues for cluster#1 have mean price range of {:.02f} and rating spread around {:.02
f}".
      format(result['average_price'].mean(), result['rating'].astype(float).mean()))
```

```
These venues for cluster#1 have mean price range of 130.77 and rating spread around 4.15
```

C2

```
print("These venues for cluster#2 have mean price range of {:.02f} and rating spread around {:.02
f}".
      format(result['average_price'].mean(), result['rating'].astype(float).mean()))
```

```
These venues for cluster#2 have mean price range of 713.71 and rating spread around 4.31
```

C3

```
print("These venues for cluster#3 have mean price range of {:.02f} and rating spread around {:.02
f}".
      format(result['average_price'].mean(), result['rating'].astype(float).mean()))
```

```
These venues for cluster#3 have mean price range of 342.61 and rating spread around 3.98
```

C4

```
print("These venues for cluster#4 have mean price range of {:.02f} and rating spread around {:.02
f}".
      format(result['average_price'].mean(), result['rating'].astype(float).mean()))
```

```
These venues for cluster#4 have mean price range of 1026.25 and rating spread around 4.37
```

C5

```
print("These venues for cluster#5 have mean price range of {:.02f} and rating spread around {:.02
f}".
      format(result['average_price'].mean(), result['rating'].astype(float).mean()))
```

```
These venues for cluster#5 have mean price range of 1566.67 and rating spread around 4.27
```

Conclusion

Recommendation for Mobile Food Truck

Though, there was no temporal information in the data, but based on evidence of two categories of food, the second highest was Ice Cream, does suggest based on real life experience.

- Indira Nagar for late evening Ice Cream and Dessert Options
- CBD and Indira Nagar for Day Time Packed Lunch
- Pick and Go Food Option like Biryani in Koramangala, Indira Nagar in the evening time.

However, more analysis with temporal aspect of the data has to be factored in for more accurate analysis.

Q&A

References

- Foursquare Developer https://developer.foursquare.com/
- Zomato Developer https://developers.zomato.com/
- PyPI BeautifulSoup and other libraries
- IBM Developers and CognitiveClasses.ai
  https://www.cognoitiveclasses.ai
- Coursera courses in IBM Applied Data Science
  https://www.coursera.org

Q&A

References

- Foursquare Developer https://developer.foursquare.com/
- Zomato Developer https://developers.zomato.com/
- PyPI BeautifulSoup and other libraries
- IBM Developers and CognitiveClasses.ai https://www.cognoitiveclasses.ai
- Coursera courses in IBM Applied Data Science https://www.coursera.org

Thanks for your attention. Any Questions!