



Coursera Capstone

IBM Applied Data Science Capstone

Opening a new shopping mall in Bangalore, India.

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Business Problem

- Location of the shopping mall is one of the most important decisions that will determine whether the mall will be a success or a failure.
- Objective: To analyse and select the best locations in the city of Bangalore, India to open a new shopping mall
- This project is timely helps as the city is currently suffering from oversupply of shopping malls
- Business question

In the city of Bangalore , India, if a property developer is looking to open a new shopping mall, where would you recommend that they open it?



Data

❖ Data Required

List of neighbourhoods in Bangalore

Latitude and Longitude co-ordinates of neighbourhoods

Venue data, particularly data related to shopping malls

❖ Sources of Data

Wikipedia https://en.wikipedia.org/wiki/Category:Neighbourhoods_in_Bangalore

Four square API for venue data



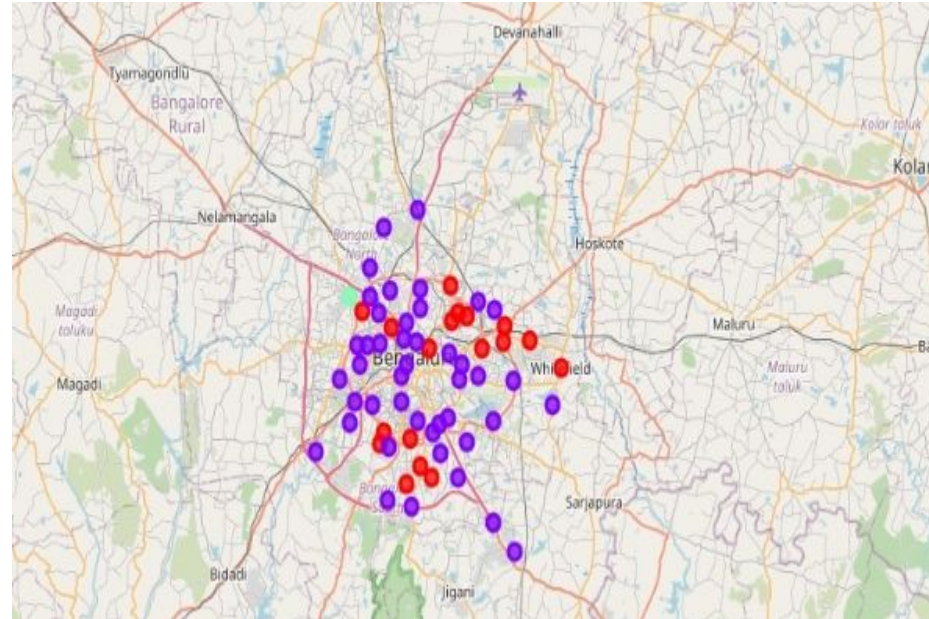
Methodology

- Web scraping wikipediapage for Neighbourhoods list
- Get latitude and longitude coordinates using Geocoder
- Use Foursquare API to get venue data
- Group data by neighbourhood and taking the mean of the frequency of occurrence of each venue category
- Filter venue category by shopping mall
- Perform clustering on the data by using k-means clustering
- Visualize the clusters in a map using Folium

Results

Categorized the neighbourhoods in to 3 clusters :

- Cluster 0: Neighbourhoods with high concentration of shopping malls
- Cluster 1: Neighbourhoods with moderate number of shopping malls
- Cluster 2: Neighbourhoods with low number or no existence shopping malls





Discussion

- Most of the shopping malls are concentrated in the Eastern part of the city
- Highest number in cluster 0 and moderate in cluster 1
- Cluster 2 has very low number to no shopping mall in the neighbourhood
- Oversupply of shopping malls mostly happened in the Eastern part of the city with the suburb area still have very few shopping malls



Recommendations

- Open new shopping malls in Neighbourhoods in cluster 2 with little to no competition
- Can also open in neighbourhoods in cluster 1 with moderate competition if have unique selling propositions to stand out from the competition
- Avoid neighbourhoods in cluster 0, already high concentration of shopping malls and intense competition



Conclusion

- Answer to business question : The neighbourhoods in cluster 2 are the most preferred locations to open a new shoppingmall
- Findings of this project will help the relevant stakeholders to capitalize on the opportunities on high potential locations while avoiding overcrowded areas in their decisions to open a new shopping mall



Thank you!!!