

Coursera Capstone

IBM Applied data science capstone

Opening a new Ice Cream Shop in Bangalore, India

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Business Problem

- ☆ Location of the Ice cream shop 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 Ice cream shop.
- ☆ This project is timely as the city is currently suffering from oversupply o
- ☆ Business question
In the city of Bangalore, India, if a property developer is looking to open a new Ice cream shop, where would you recommend that they open it?

Data

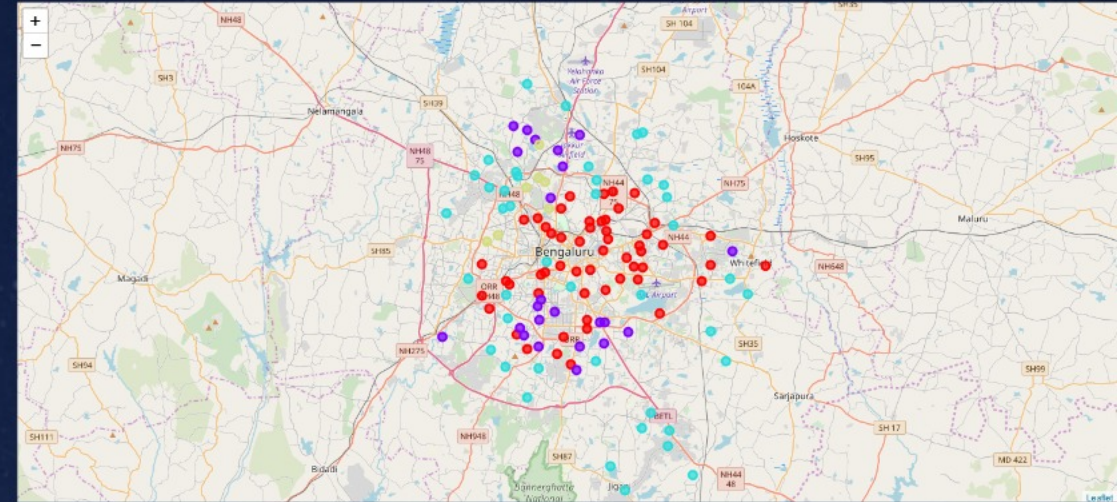
- ☆ Data required
 - List of neighbourhoods in Bangalore
 - Latitude and longitude coordinates of the neighbourhoods
 - Venue data, particularly data related to Indian Restaurants
- ☆ Sources of data
 - Wikipedia page for neighbourhoods
(https://en.wikipedia.org/wiki/Category:Neighbourhoods_in_Bangalore)
 - Geocoder package for latitude and longitude coordinates
 - Foursquare API for venue data

Methodology

- ☆ Web scraping Wikipedia page 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 Ice cream shop
- ☆ Perform clustering on the data by using k-means clustering
- ☆ Visualize the clusters in a map using Folium

Results

- ☆ Categorized the neighbourhoods into 3 clusters :
 - Cluster 3: Neighbourhoods with moderate number of Ice cream shops
 - Cluster 4: Neighbourhoods with low number to no existence of Ice cream shops
 - Cluster 1: Neighbourhoods with high concentration of Ice cream shops



Discussion

- ☆ Most of the Ice cream shops are concentrated in the central area of the city
- ☆ Highest number in cluster 1 and moderate number in cluster
- ☆ Cluster 4 has very low number to no Ice cream shops in the neighbourhoods
- ☆ Oversupply of Ice cream shops mostly happened in the central area of the city, with the suburb area still have very few Ice cream shops

Recommendations

- ☆ Open new Ice cream shops in neighbourhoods in cluster 4 with little to no competition
- ☆ Can also open in neighbourhoods in cluster 3 with moderate competition if have unique selling propositions to stand out from the competition
- ☆ Avoid neighbourhoods in cluster 1, already high concentration of Ice cream shops and intense competition

Conclusion

- ☆ Answer to business question: The neighbourhoods in cluster 4 are the most preferred locations to open a new Ice cream shops
- ☆ 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 Ice cream shops

Thank you....