Coursera Capstone

IBM Applied data science capstone

Opening a new Indian Restaurant in Bangalore, India

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Business Problem

☆ Location of the Indian Restaurant 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 Indian Restaurant.

☆ 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 Indian Restaurant, where would you recommend that they open it?
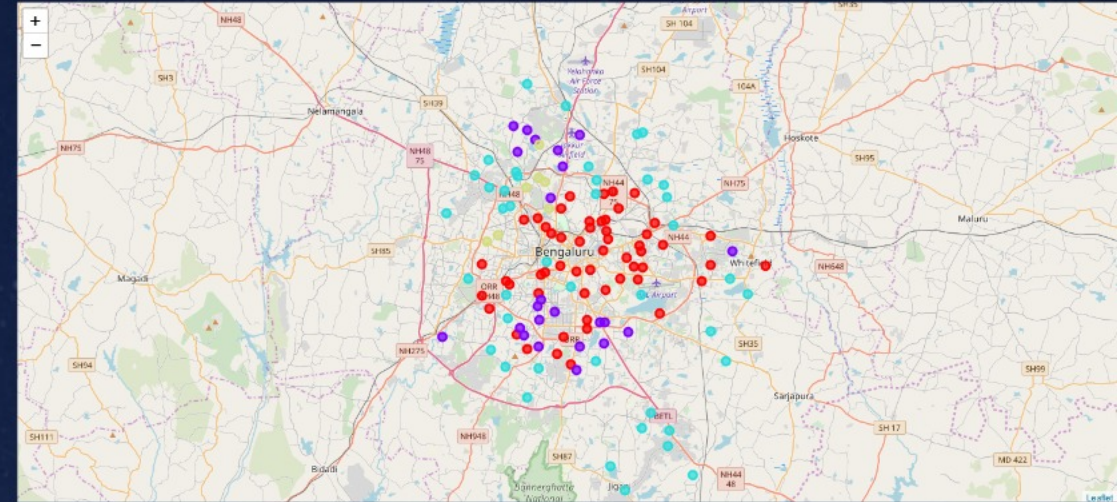
Data

☆ 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 Indian Restaurant

☆ 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 2: Neighbourhoods with moderate number of Indian Restaurant
➢Cluster 4: Neighbourhoods with low number to no existence of Indian Restaurant
➢Cluster 1: Neighbourhoods with high concentration of Indian Restaurants

Discussion

☆ Most of the Indian restaurants are concentrated in the central area of the city

☆ Highest number in cluster 3 and moderate number in cluster

☆ Cluster 4 has very low number to no indian restaurants in the neighbourhoods

☆ Oversupply of Indian Restaurant mostly happened in the central area of the city, with the suburb area still have very few indian restaurants

Recommendations

☆ Open new Indian Restaurant in neighbourhoods in cluster 4 with little to no competition

☆ Can also open in neighbourhoods in cluster 2 with moderate competition if have unique selling propositions to stand out from the competition

☆ Avoid neighbourhoods in cluster 3, already high concentration of Indian Restaurants and intense competition

Conclusion

☆ Answer to business question: The neighbourhoods in cluster 4 are the most preferred locations to open a new Indian Restaurant

☆ 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 Indian Restaurants

Thank you....