

Coursera : Capstone Project

IBM Data Science

Title: Hotel Apartment Business in Kochi, Kerala

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Business Problem

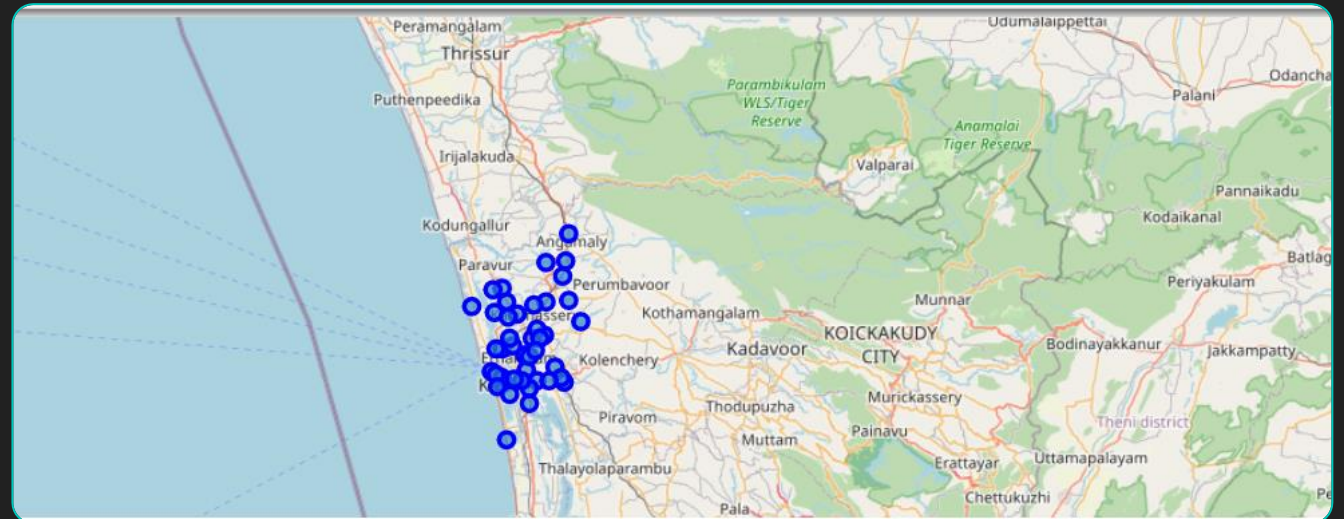
- client wants to utilize the hospitality business potential of Kochi
- Location is the most important factor for success
- Where to open the hotel?
- What are the factors to consider?

Data

- Suburbs of Kochi - https://en.wikipedia.org/wiki/Category:Suburbs_of_Kochi
- Location data for each neighborhood
- Venue data

Data Acquisition & Cleaning

- Python packages to extract and clean the data.
- Location data is added
- Map is created



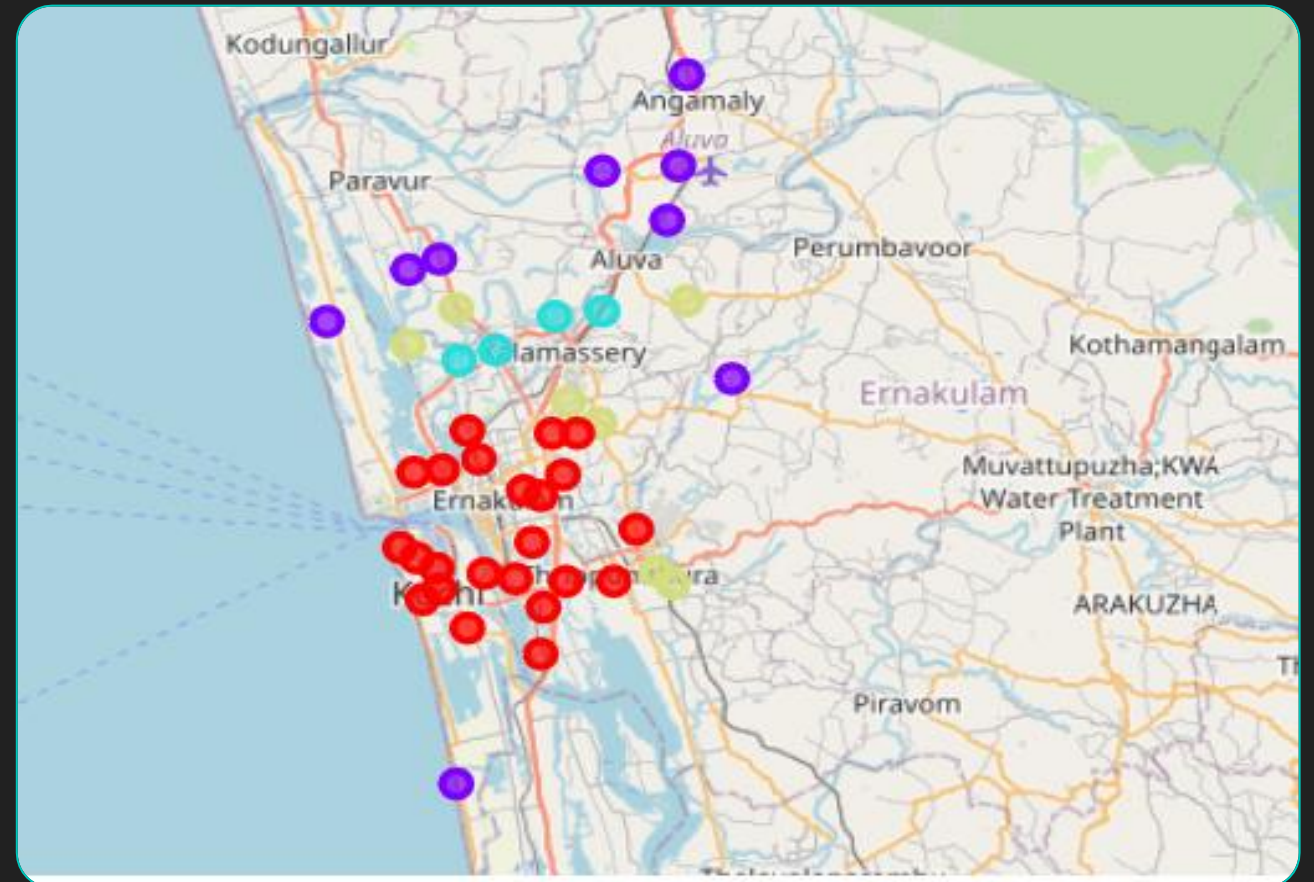
Exploratory Analysis

- Foursquare API is used to get the venue details
- Identified the depending venue category for hotel business

	Neighborhood	Latitude	Longitude	Number of Hotels	Number of Transportation points	Number of Restaurants	Number of Shopping Malls	Number of Cinemas
0	Alangad	10.847500	76.436090	0.0	1.0	1	0.0	0.0
1	Angamaly	10.203660	76.382680	4.0	1.0	8	0.0	2.0
2	Aroor	9.936010	76.261420	13.0	0.0	30	1.0	0.0
3	Chellanam	9.835260	76.270290	1.0	2.0	2	1.0	0.0
4	Chendamangalam	10.022316	76.339358	5.0	0.0	35	2.0	1.0

Cluster Analysis

- Cluster Analysis is performed
- Clustered the data into 4 clusters
- Analyzed each cluster and a map is created



Result

- Cluster 0: Neighborhoods has the high number of hotels.
- Cluster 1: Neighborhoods with very a smaller number of hotels,
- Cluster 2 and 3: Neighborhoods with smaller number of hotels but higher than Cluster 1

Observations

- Cluster 0 has the greatest number of hotels.
- cluster 0 is closer to the city center
- Cluster 0 also has the highest number of shopping malls, cinema and Restaurants
- Less completion in Cluster 1,2 and 3
- Very less restaurants, malls in cluster 1 and 2
- Cluster 3 has good number of restaurants and malls

Conclusion

Based on the analysis below mentioned clusters and neighborhoods are selected,

- Cluster 3 is looking promising with not much competition and other customer attracting facilities like restaurant, malls and cinema. Consider locations like Kadamakkudy and Thiruvankulam.
- If client is ready to accept the competition and provide a good quality service, then we can even consider the center of the city which is Cluster 0 where most of the hotels are located. Consider locations like Irumpanam and vaduthala.

Thank You

