Coursera Capstone

IBM Applied Data Science Capstone

Opening a New Shopping Mall in Mumbai, India

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BUSINESS PROBLEM

- Analyze and select the best location in Mumbai for opening a shopping mall.
- Target customer will be builders, investor , entrepreneurs and businessmen.
- Recommend best location to them

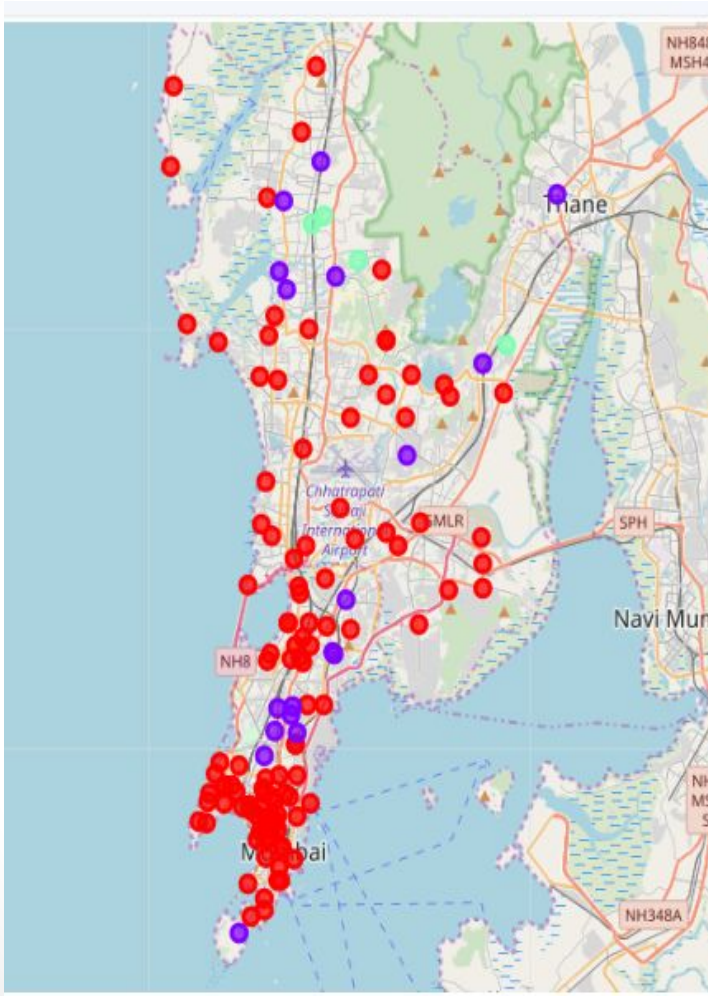
DATA

- List of neighborhoods in Mumbai
- Latitude and longitude of those neighborhoods
- Venue information

METHODOLOGY

- Web scrapping *Wikipedia* page for neighborhood list
- Get latitude and longitude using Geocoder
- Use Foursquare API to get venue information
- Group data by neighborhood and taking the mean of the frequency of occurrence of each venue category
- Filter venue category by Shopping Mall
- Perform clustering on the by using k-means clustering
- Visualize the clusters in a map using Folium

RESULT



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

DISCUSSION

- Most of the shopping malls are concentrated in the edge of the city
- Highest number in cluster 2 and moderate number in cluster 1
- Cluster 0 has very low number to no shopping mall
- Suburb area still have very few shopping malls

RECOMMENDATION

- Open new shopping malls in neighborhoods in cluster 0 with little to no competition
- With unique selling propositions to stand out from the competition, open new shopping malls neighborhoods in cluster 1
- Avoid neighborhoods in cluster 2 as shopping malls are highly concentrated with intense competition

CONCLUSION

- Cluster 0 are the most preferred locations to open a new shopping mall
- Better investment and high success rate for shopping malls in Cluster 0 and 1

THANK YOU !