



Coursera Capstone

The Battle of Neighborhoods

Opening a New Shopping Mall in Kuala Lumpur, Malaysia

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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 analyze and select the best locations in the city of Kuala Lumpur, Malaysia to open a new shopping mall.
- This project is timely as the city is currently suffering from oversupply of shopping malls.
- Business Question:
 - In the city of Kuala Lumpur, Malaysia, if a property developer is looking to open a new shopping mall, where would you recommend to open it?

Data

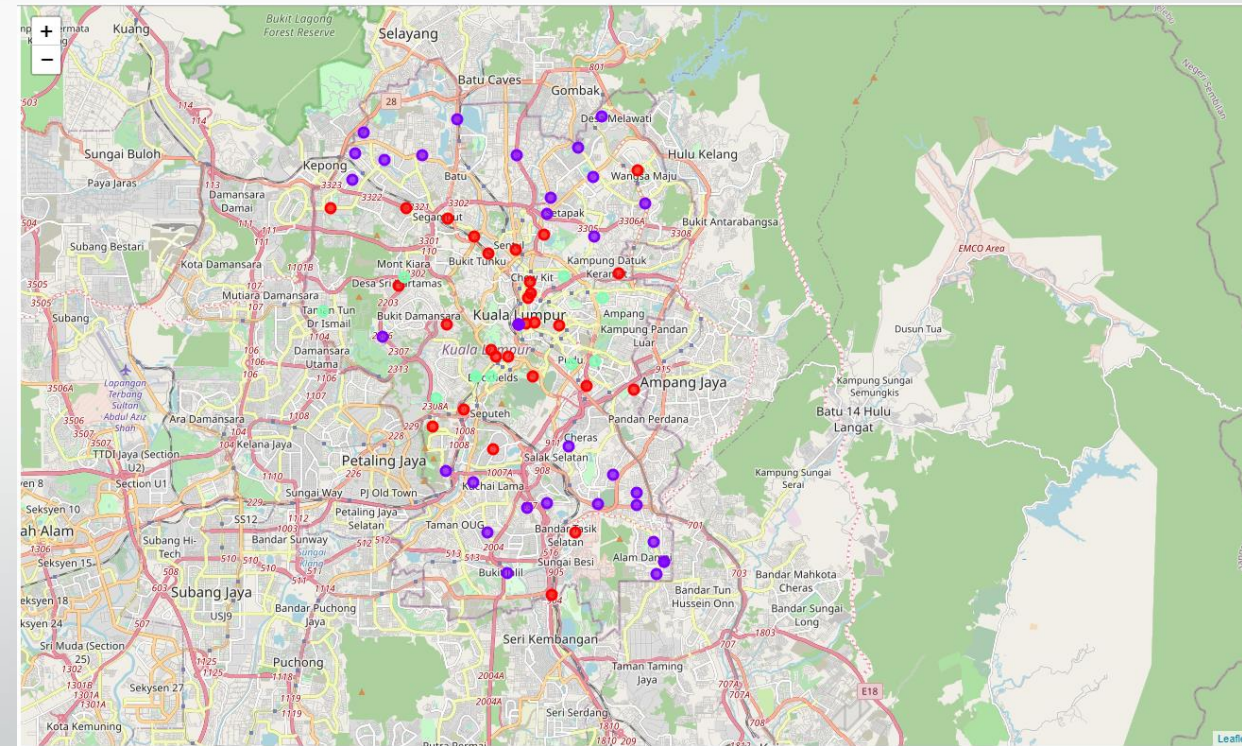
- Data Required
 - List of neighborhoods in Kuala Lumpur.
 - Latitude and Longitude coordinates of the neighborhoods.
 - Venue Data, particularly data related to shopping malls.
- Source of data
 - Wikipedia page for neighborhoods https://en.wikipedia.org/wiki/Category:Suburbs_in_Kuala_Lumpur
 - Geocoder Package for latitude and longitude coordinates
 - Foursquare API for venue data.

Methodology

- Web scraping Wikipedia page for neighborhoods list
- Get latitude and longitude coordinates using Geocoder
- Use Foursquare API to get venue data
- Group data by neighborhood and taking the mean of the frequency of occurrence of each venue category
- Filter the 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 neighborhoods into three clusters:
 - Cluster 0 - Neighborhoods with moderate number of shopping malls
 - Cluster 1 - Neighborhoods with low number to no existence of shopping malls
 - Cluster 2 - Neighborhoods with high concentration of shopping malls



Discussion

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

Recommendations

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

Conclusion

- Answer to business question – The neighborhoods in cluster 1 are the most preferred location to open a new shopping mall
- Findings of this project will help the relevant stakeholders to capitalize on the opportunities on high potential locations while avoiding overcrowded areas in their decision to open a new shopping mall.