

Coursera Capstone IBM Applied Data Science

SUB. : OPENING A NEW MALL IN KAULA LAMPUR CITY.. SUCCESS
OR FAILURE?

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Business Problem

Deciding the location of the the mall is one of the key point that determines whether the mall is success or failure

To analyze the data that is available to determine the best place to built mall

There are plenty of mall present in the city right now so we are considering this as timely project

Business Question:

- ❑ If any property developer is willing to build a shopping mall in the city Kaula Lampur, Malysia which would be the best place you will recommend?

Data

Data Required

- List of neighborhoods of city Kaula Lumpur
- Latitude of longitude coordinates of the same
- Venue data, specifically data related and required for shopping malls

Sources of data

- Wikipedia Page for neighborhoods([https://en.Wikipedia.org/wiki/Category: Suburbs](https://en.Wikipedia.org/wiki/Category:Suburbs) in Kaula Lumpur)
- Geocodor package for latitude and longitude coordinates
- Foursquare API for venue data

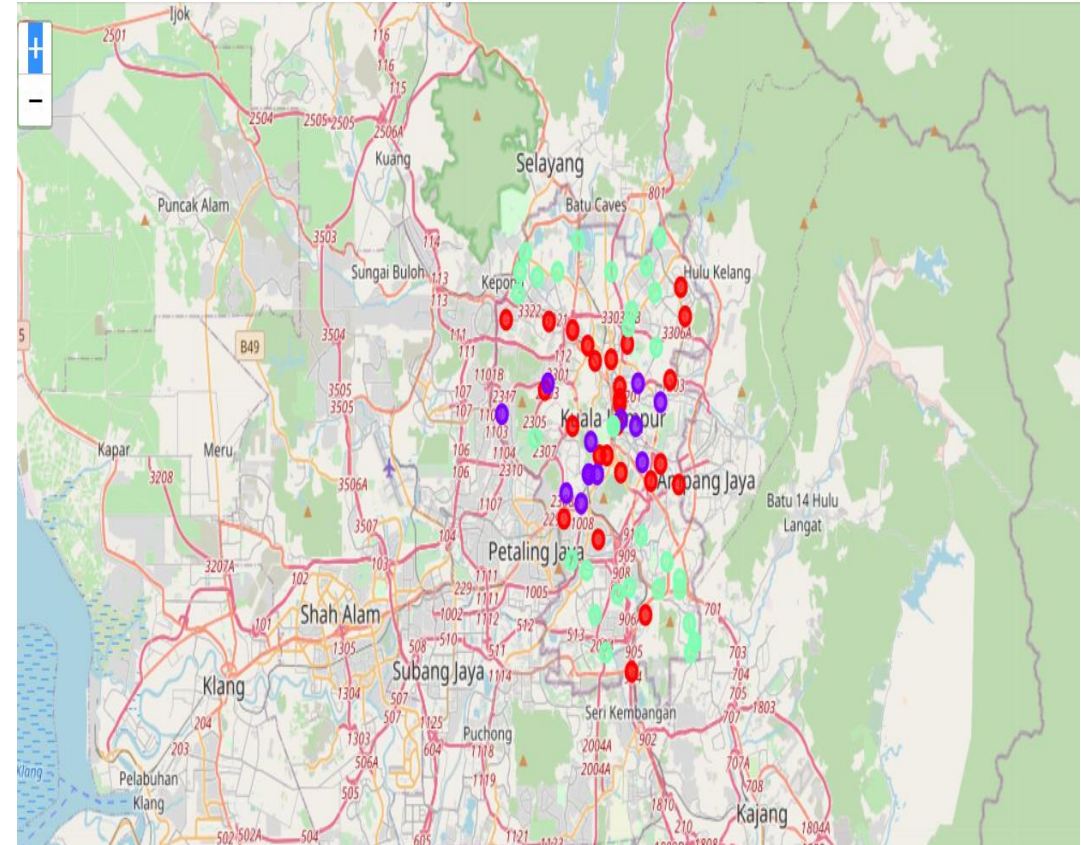
Methodology

- Web scraping Wikipedia page for neighborhoods list
- Get latitude and longitude coordinates using geocodor
- 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 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 3 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 number to no shopping mall 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 competitions if have unique selling propositions to stand out from the competition
- ❖ Avoid neighborhoods in cluster 2, already high concentration of shopping malls and intense competition

Conclusion

- Answer to business question : The neighborhoods in cluster 1 are the most preferred locations 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 decisions to open a new shopping mall

Thank You!

