

# **Coursera Capstone**

**IBM Applied Data Science Capstone**

**Finding a good location for opening a new  
Asian restaurant in Kuala Lumpur, Malaysia**

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# Business Problem

- Location of the Asian restaurant is one of the most important decisions that will determine its success or failure.
- Objective: To analyze and select the best locations in the city of Kuala Lumpur, Malaysia to open a new Asian restaurant.
- This project is timely as the current corona virus travel restrictions and stay home rules are causing excessive stress on families. In addition to work , kids, their schooling cooking and cleaning are adding to the stress. A restaurant catering to home type cooked meals at a close proximity is a solution to many problems now and later.
- Business question
  - ❖ In the city of Kuala Lumpur, Malaysia, if a business investor is looking to open an Asian restaurant, what would be the ideal neighborhood?

# Data

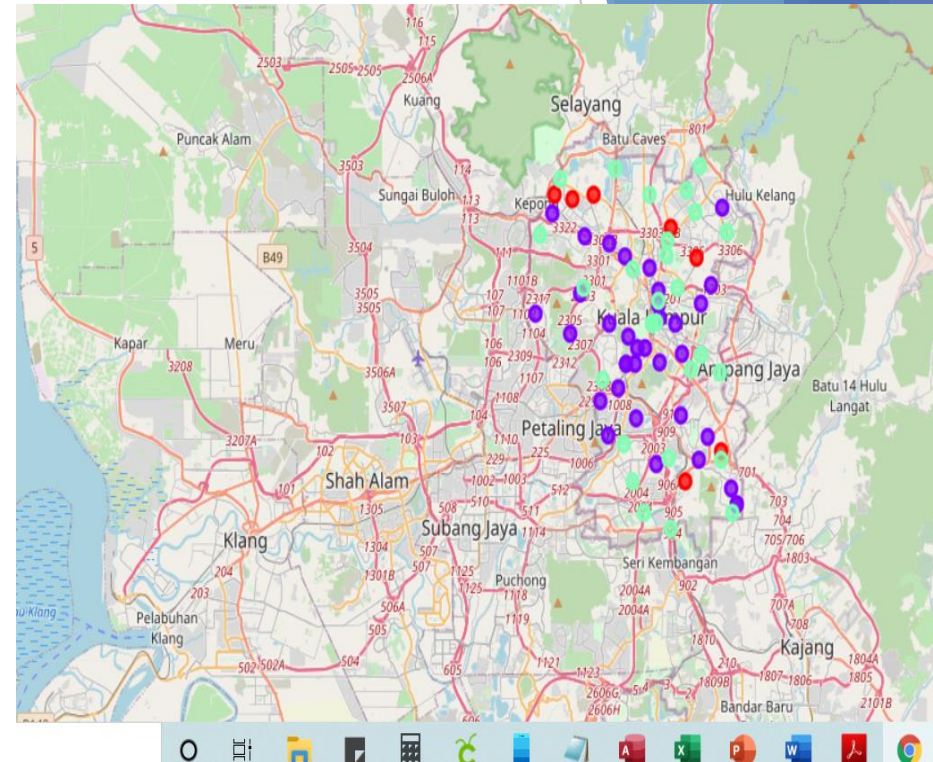
- Data required
  - ❖ List of neighborhoods in Kuala Lumpur.
  - ❖ Latitude and Longitude coordinates of the neighborhoods.
  - ❖ Venue data, particularly data related to Asian restaurants.
- Sources of data
  - ❖ Wikipedia page for neighborhoods in Kuala Lumpur, Malaysia.
  - ❖ Geocoder package for coordinates.
  - ❖ Foursquare API for venue data.

# Methodology

- Web scraping Wikipedia page for neighborhood lists.
- Get Latitudes and Longitudes using Geocoder.
- Using Foursquare API to get venue data.
- Group data by neighborhood and taking the mean frequency of occurrence of each venue category.
- Filter venue category by Asian restaurant.
- Perform clustering on the data by K-means clustering.
- Visualize the clusters in map using Folium

# Results

- Categorize the neighborhoods using three clusters:
  - ❖ Cluster 0: Neighborhoods with least number of Asian restaurants.
  - ❖ Cluster 1: Neighborhoods with highest number of Asian restaurants.
  - ❖ Cluster 2: Neighborhoods with moderate number of Asian restaurants.



# Discussion

- Most of the Asian restaurants are concentrated in the central area of the city.
- Highest number in cluster 1 and moderate number in cluster 2.
- Cluster 0 neighborhood in the suburbs have very few Asian restaurants.

# Recommendation

- Open new Asian restaurants in neighborhoods in cluster 0 with little or no competition.
- Can also open in neighborhoods in cluster 2 with moderate competition, if the business is a chain or already established.
- Avoid the neighborhoods in cluster 1 , already high competition and high concentration.

# Conclusion

- Answer to business question: The neighborhoods of cluster 0 are the most preferred locations to open a new Asian restaurant.
- Findings in this project will help relevant business investors to capitalize on the opportunities on high potential locations while avoiding overcrowded areas in their decision making process.



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