IBM Data Science Capstone

Opening an African Restaurant in Kuala Lumpur

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Business Problem

- Kuala Lumpur is the largest city in Malaysia, covering an area of 243 sq km with an estimated population of 1.73 million and is among the fastest growing metropolitan cities in the world.

- My client from Kenya is interested in opening an African Restauarant in the KL city. Hence, it is important to identify a good location for our client to open a restaurant that can draw a large number of crowd.

- The aim is to identify the best suburb in the KL city to open my client's African Restaurant.

Data

- The data is obtained from mainly three sources.

- Wikipedia - The wikipedia page is used to extract the list of suburbs in the Kuala Lumpur city.

- Latitude and Longitude data of each suburb in KL City extracted using python's geocoder library.

- Foursquare API to obtain the venues in the listed suburbs.

Methodology

- Extract the suburb list from the Wikipedia page.

- Obtain the latitude and longitude information for the suburbs using the python geocoder package.

- Use the Foursquare API to get the venues in each of these suburbs.

- Filter the venues to only contain the restaurants in the listed suburbs.

- Once filtered, use a unsupervised machine learning algorithm called Clustering to cluster the suburbs into k = 3 clusters.

- Analyze the cluster and recommend a suitable cluster of suburbs to the client to open the restaurant.
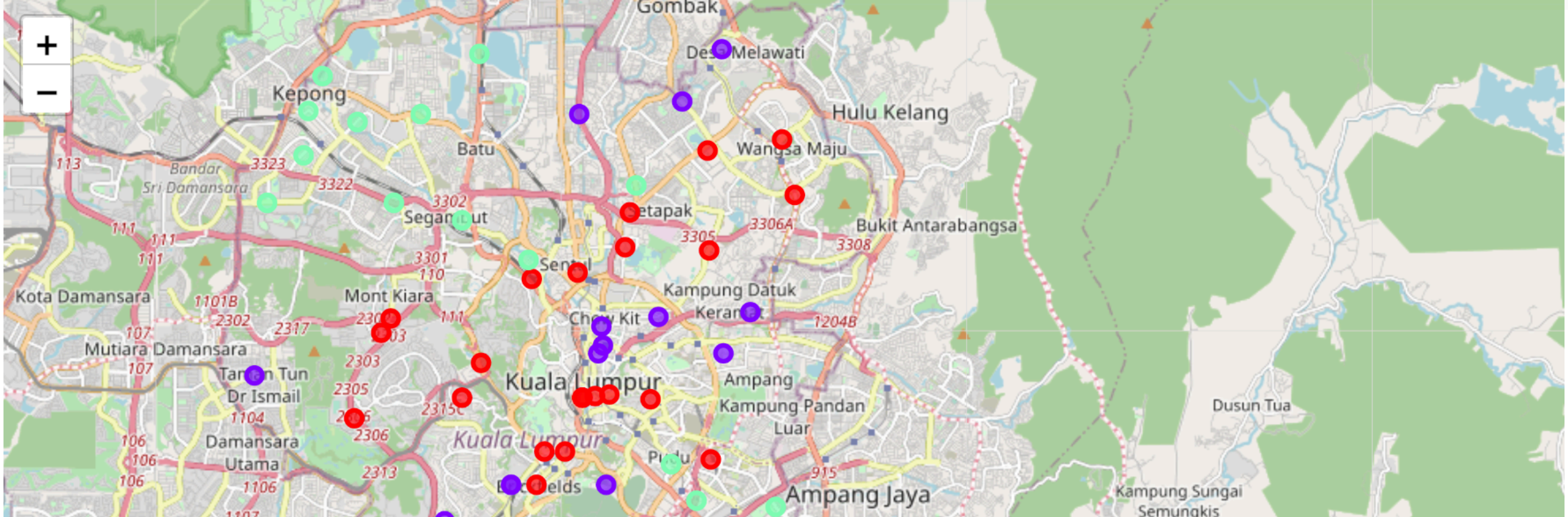
Results

- As described in the methodology section, the suburbs were divided into three clusters.
- Cluster 0 comprised of 34 suburbs.
- Cluster 1 comprised of 17 suburbs.
- Cluster 2 comprised of 20 suburbs.

Recommendation

- Most of the African Restaurants are located in two clusters (Cluster 0 and Cluster 2) with all of the restaurants situated or concentrated in a very few suburbs.

- Cluster 1 has no African restaurants. But Cluster 1 also contains one of the busiest suburbs in KL city known as Bangsar. This suburb is home to a large number of residential complexes, restaurants, businesses etc.

- We choose Bangsar city from Cluster 1 for our client to open his African Restaurant as it is guaranteed to draw a multinational crowd.

THANK YOU