Building A Park in Kuala Lumpur, Malaysia

Kuala Lumpur a Metropolitan City

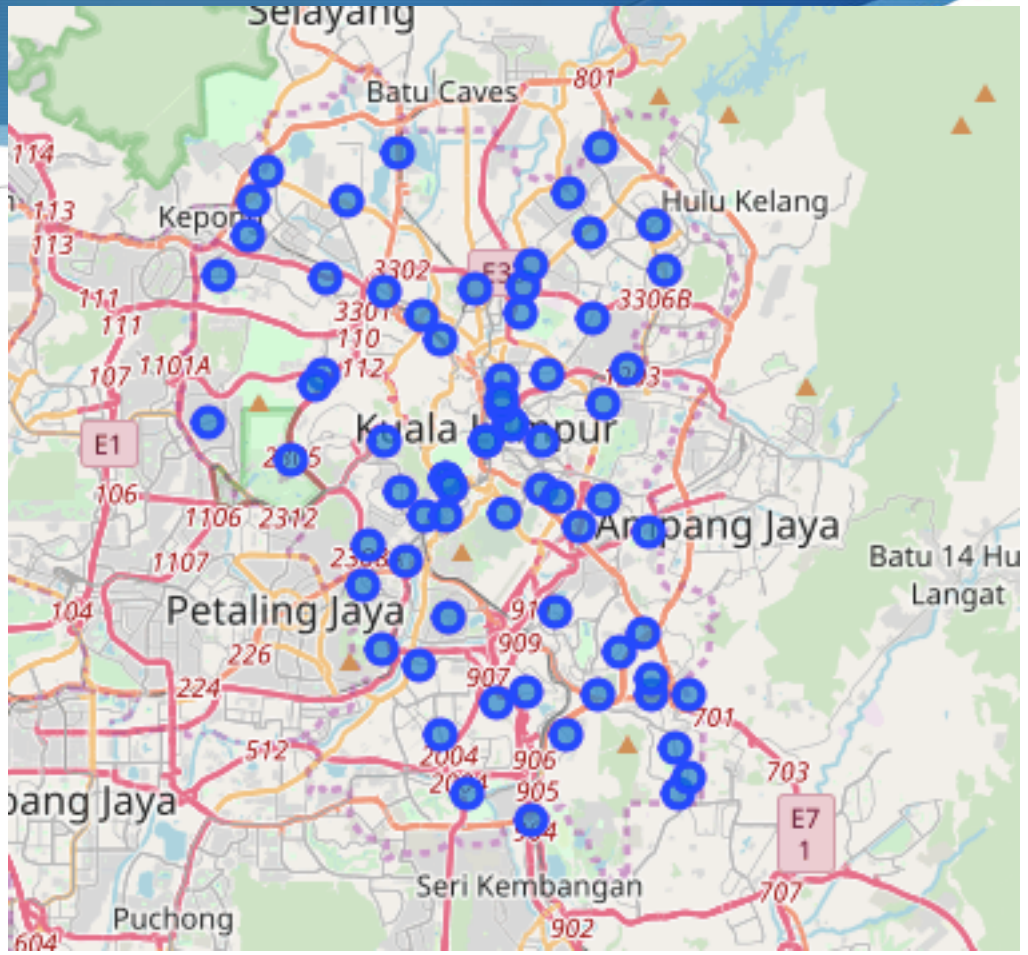
- A crowded and bustling of concrete city
  - Lead to increasing carbon emission rate
  - Physical and mental health of citizens
- Proposed solution : A green city
  - Build a green park

Data Acquisition

- List of Kuala Lumpur neighbourhoods
- Latitude and longitude of the neighbourhoods
- Venues data of each neighbourhoods
  - Related to build a park

Map the City of Kuala Lumpur

- Python BeautifulSoup library
  - Scrap the link from wikipedia
  - To acquired the list of neighbourhood
- Latitude and longitude of the neighbourhoods
  - Using Python request library and arcgis API
- Map the city of Kuala Lumpur
  - Using Folium Package from Python



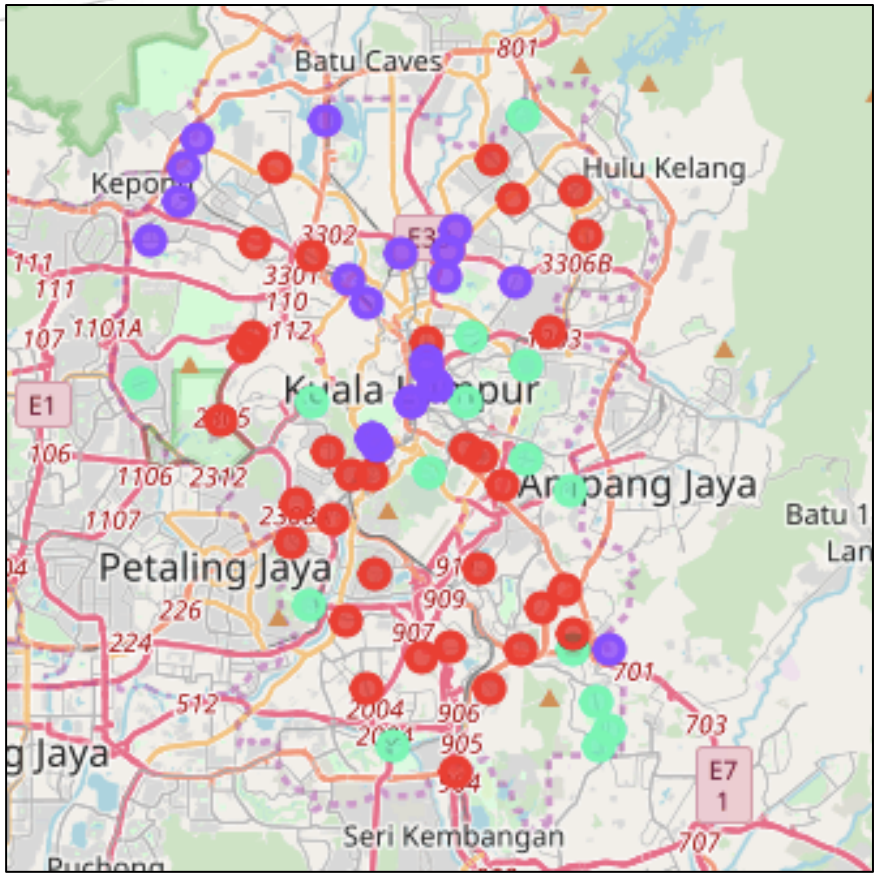
Determine and Distinguish the neighbourhood

- Foursquare API
  - Set to 2000 metre radius and limit to 100 venues
  - Filtered the venue with "Park" category
- K-Mean Clustering
  - Using K = 3; 3 group of clusters
  - To determine the availability of park in each neighbourhood
  - Create a new dataframe

	Neighbourhood	Latitude	Longitude	Cluster Labels	Park
0	Alam Damai	3.057690	101.743880	2	0.010000
1	Ampang, Kuala Lumpur	3.153153	101.700413	1	0.020000
2	Bandar Menjalara	3.190350	101.625450	1	0.040000
3	Bandar Sri Permaisuri	3.103910	101.712260	0	0.000000
4	Bandar Tasik Selatan	3.072750	101.714610	0	0.000000
5	Bandar Tun Razak	3.082800	101.722810	0	0.000000
6	Bangsar	3.129200	101.678440	0	0.000000

Result

- Refer to the map
  - Red (cluster 0) :
    - do not have parks
  - Purple (cluster 1) :
    - low number of parks
  - Aqua (cluster 2) :
    - high number of parks
- South of Kuala Lumpur
  - the most suitable place to built a park



Conclusion

- Create a model to find a suitable place to build a park in Kuala Lumpur
- Room for improvement in the future:
  - Other Data
    - Price of the land
    - Access to the place
    - Size of the land