



Coursera Capstone project

BY YUQIAN, JULY 2020

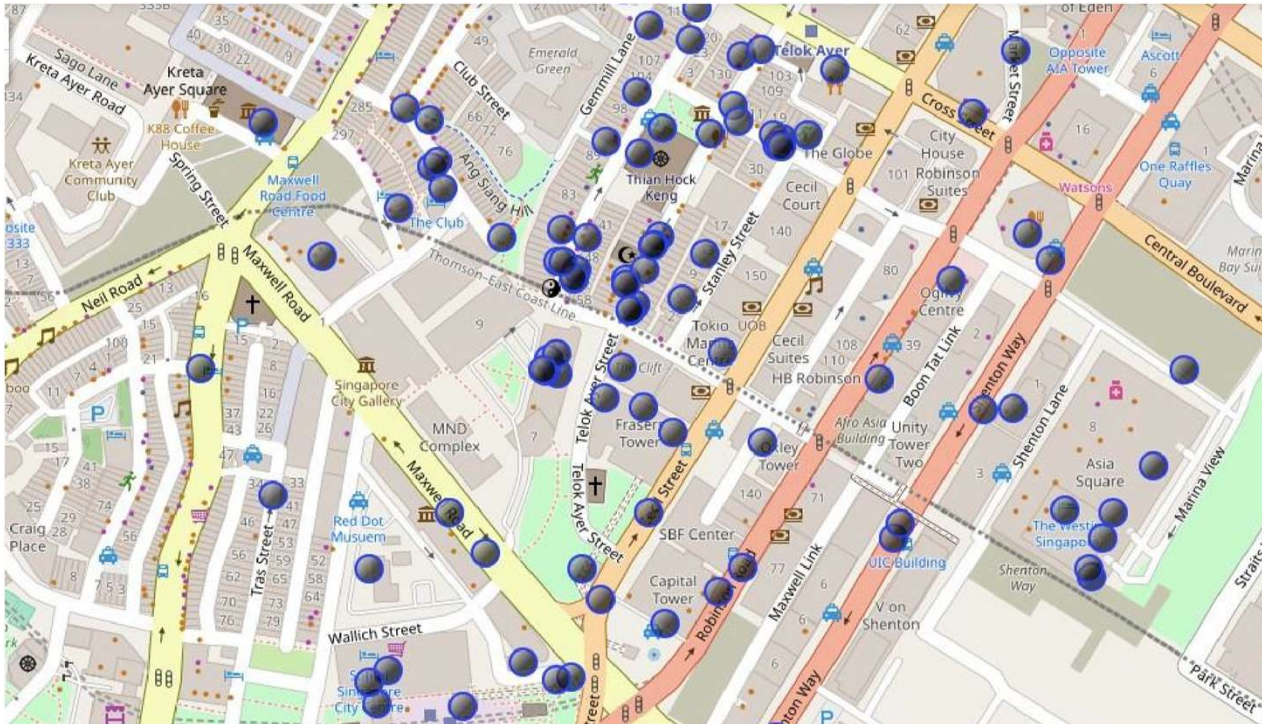
Problems to be solved

How to find an apartment in Manhattan with the following conditions:

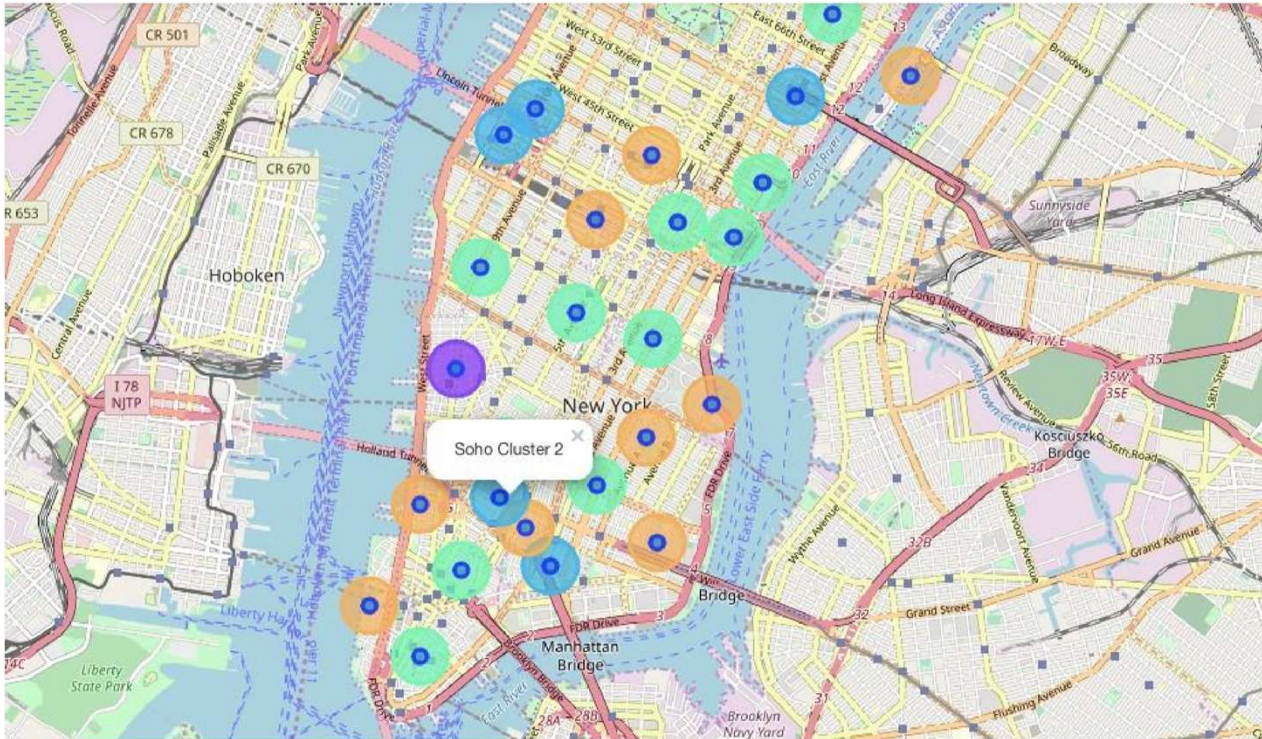
- Apartment with min 2 bedrooms
- Monthly rent not to exceed US\$7000/month
- Located within walking distance (≤ 1.0 mile, 1.6 km) from a subway metro station in Manhattan
- Venues and amenities as in my current residence.

Data acquisition and cleaning

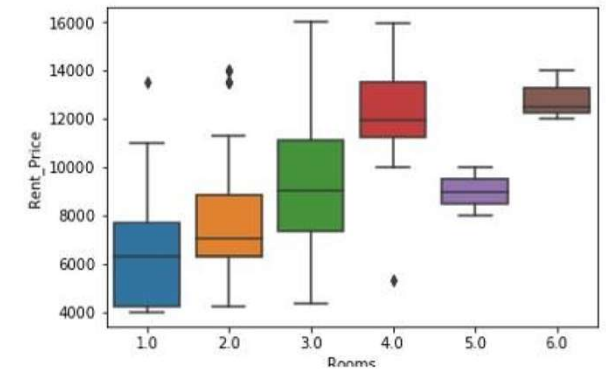
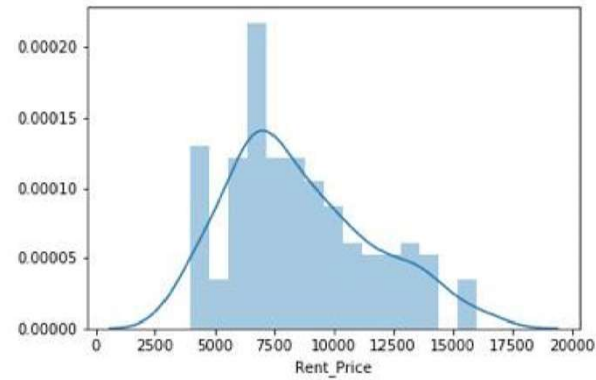
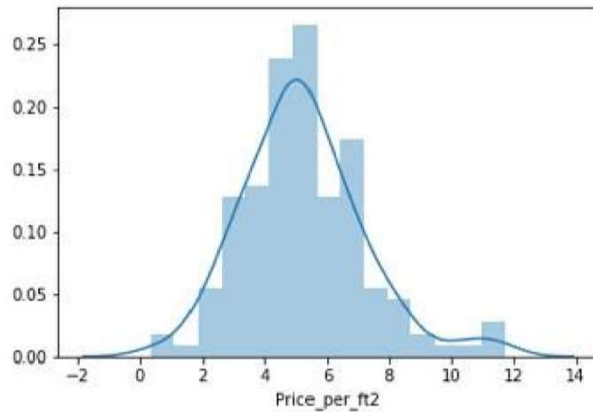
1. Singapore data and map is to be created with use of Nominatim, Foursquare and Folium mapping.
2. Manhattan neighbourhoods were obtained from Wikipedia and organized by Neighbourhoods with geodata via Nominatim for mapping with Folium.
3. List of Subway stations was obtained via Wikipedia, NY Transit web site and Google map.
4. List of apartments for rent was consolidated from web-scraping real estate sites for MH. The geolocation (lat,long) data was found with algorithm coding and using Nominatim.
5. Folium map was the basis of mapping with various features to consolidate all data in ONE map where one can visualize all details needed to make a selection of apartment



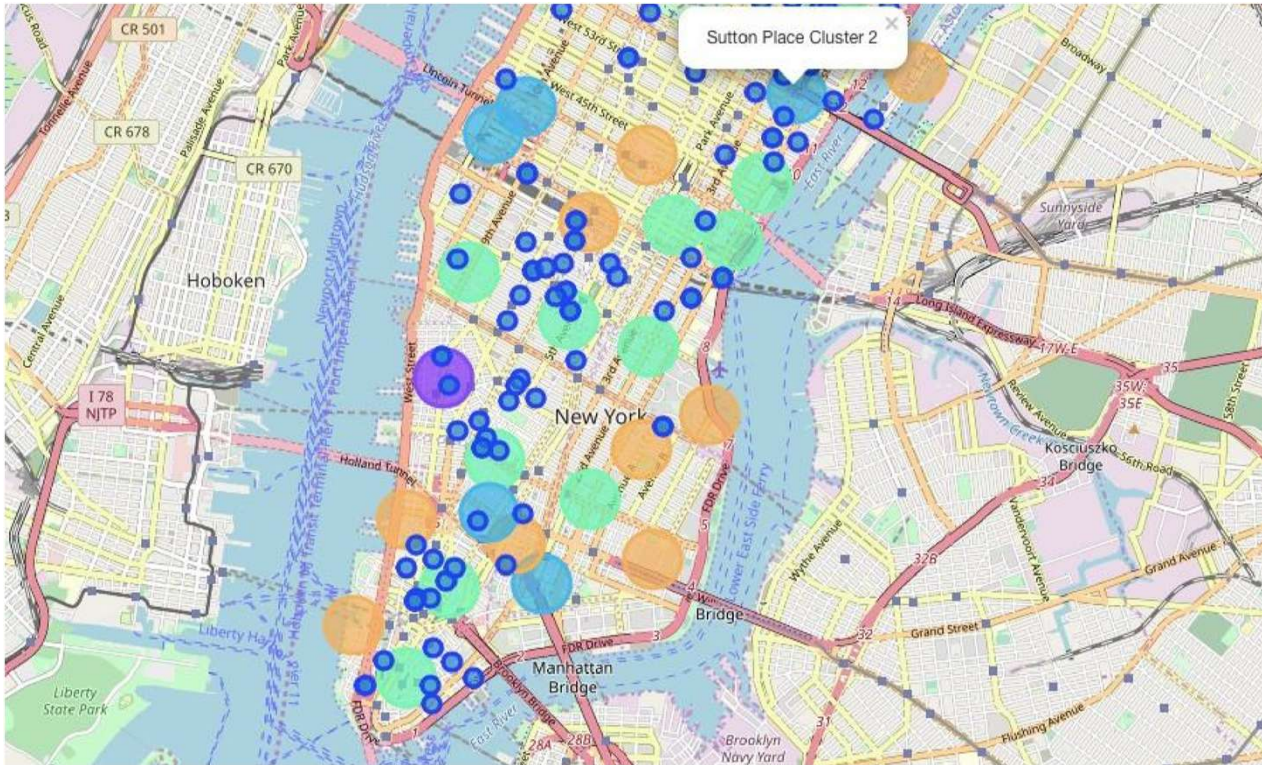
Current residence Neighborhood in Singapore



Neighborhoods and Cluster of Venues in Manhattan

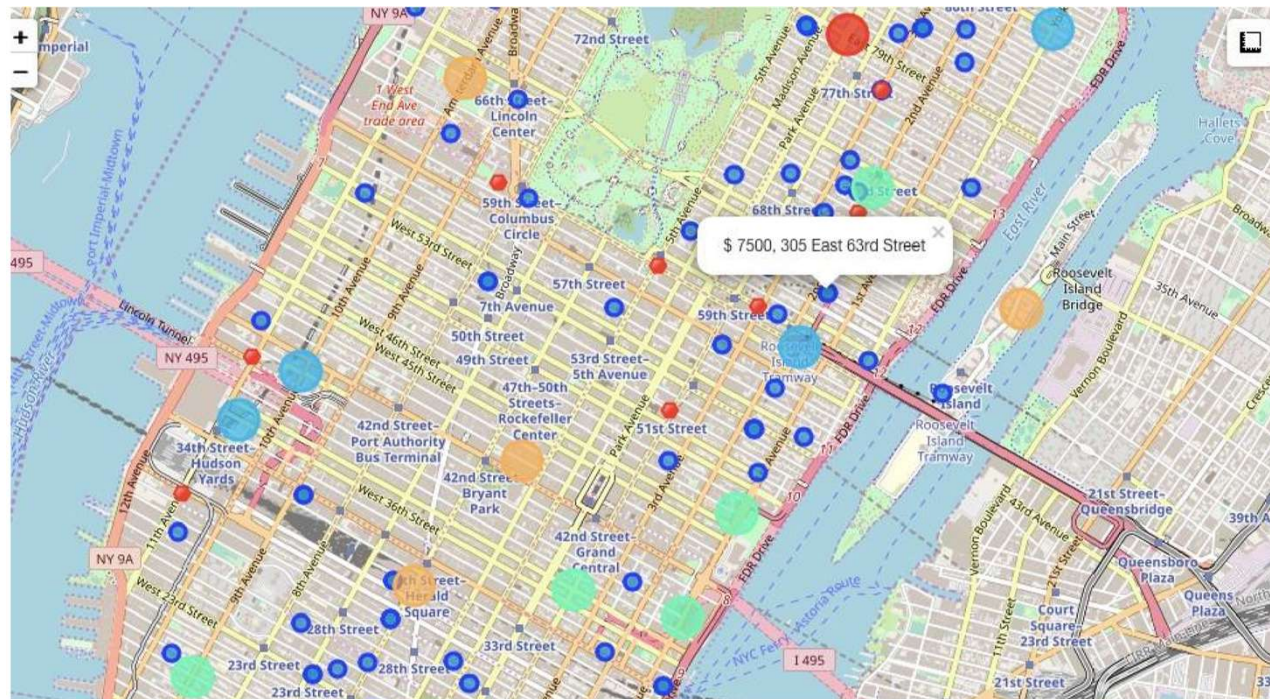


Rental Price Statistics MH Apartments



Venue clusters

Selected Apartment



Shows all information:

1. Apartments address
2. Price
3. Neighbourhood
4. Cluster of venues
5. Subway stations

Blue dots=apts

Red dots=Subway station

Bubbles=Cluster of Venues

Final Decision

Thank you for listening!

Measure distances and areas

Last point

40° 45' 43.26" N / 73° 57' 52.85" W

40.762016 / -73.964682

Path distance 837 Meters (0.52 Miles)

Area 47,328 Sq Meters (11.70 Acres)