The Battle of Neighborhoods (Week 1) – Part 2

2. Data Description and Preparation

The data on the neighborhoods of Singapore and the corresponding current apartment rental per square meter for a single person are extracted from the Neighbourhood Price Index 2019 by Nestpick. The apartment is unfurnished and the average apartment size is around 50 m^2 (+-10 m^2). The rent extracted is the median rent per square meter in USD.

Some neighborhoods are grouped together due to their similarities in the features under consideration in the study conducted by Nestpick. Only the neighborhoods and their median rent per square meter are extracted for the purpose for this project. The grouped neighborhoods were separated into each individual neighborhood with its own median rent per square meter. For the grouped neighborhoods, even though their median rent are the same but they may not be in the same vicinity and may have different amenities. In order to visualize these neighborhoods on the map of Singapore, their latitude and longitude were obtained by using Google Map.

The data were compiled into a csv file with four columns: Neighborhood, Median Rent per square meter ($), Latitude and Longitude as shown below (the first five rows only):

	Neighborhood	Median_Rent_sqm ($)	Latitude	Longitude
0	Tanjong Pagar	50.78	1.27642	103.843
1	Orchard	46.42	1.30527	103.833
2	Bishan	31.63	1.35191	103.849
3	Ang Mo Kio	31.63	1.36984	103.847
4	Chinatown	50.78	1.27335	103.844

To have a better sense on the locations of each of these neighborhoods, Folium library will be used to create a map of Singapore with the neighborhoods superimposed on it. Then each of the neighborhood will be explored using Foursquare API. The top venue

categories will be used to group the neighborhoods into clusters. Folium library will be used again to visualize the clusters of neighborhoods. Together with the information on the median rent per square meter, the data can serve as a guide in selecting a neighborhood given an individual's amenity preference and pay package.