Peer-graded Assignment:

Capstone Project - The Battle of Neighbourhoods (W1)

Data

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Background

Scarborough (Ontario), is a municipality in Canada and a suburb of Toronto. Located above the Scarborough Bluffs, occupying the eastern part of the city. Scarborough is bordered by Victoria Park Avenue to the west, Steeles Avenue to the north, Rouge River and Pickering City to the east and Lake Ontario to the south. The city is named after Scarborough (United Kingdom).

The city is one of the most multicultural of the Greater Toronto Area, hosting various religions and cultures. The city has also been declared the greenest of the Greater Toronto Area.

Methodology

I used GitHub repository as a database. My master data which has the main components *Borough, Average House Price, School Ratings and Latitude* and *Longitude* informations of the city.

I used python **folium** library to visualize geographic details of Scarborough and its neighborhood and I created a map of Scarborough with boroughs superimposed on top. I used latitude and longitude values to get the visual as below:

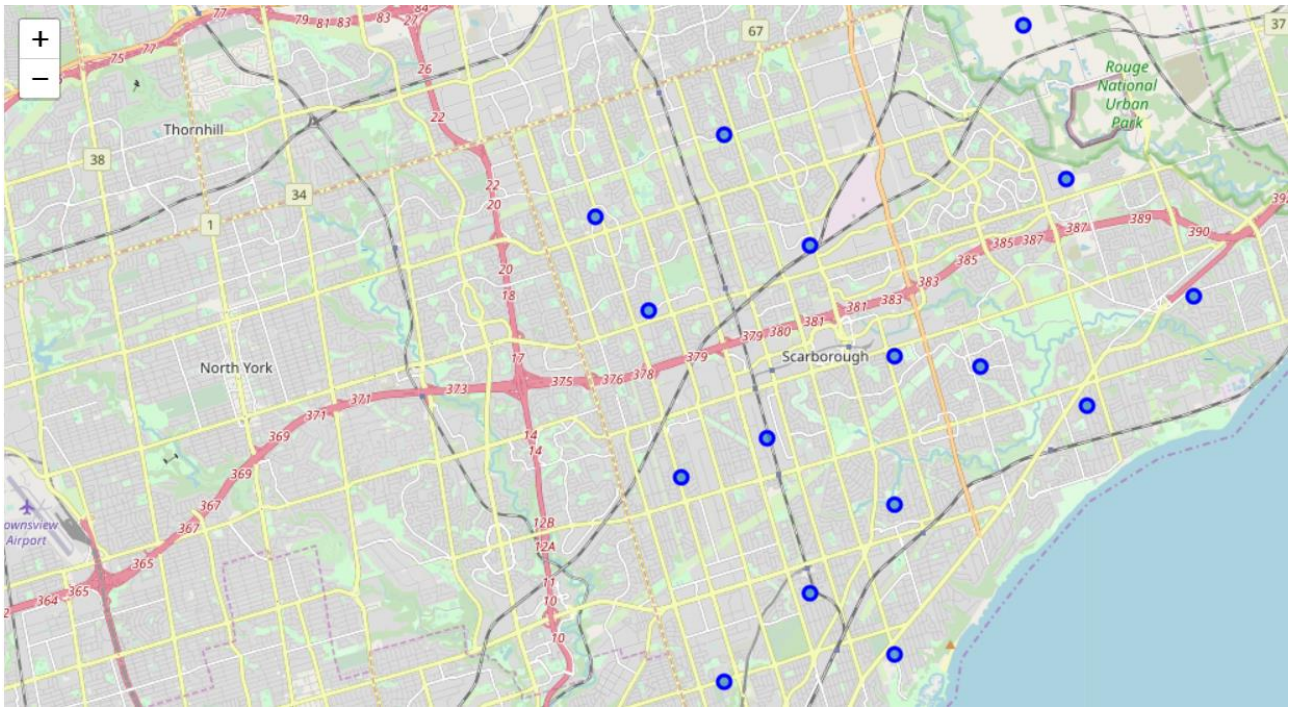

Figura 1 - Scarborough and its Neighborhoods

Geo-location data:

This project is focused on the city of Scarborough, a district of Toronto. In order to implement this work, the geo-location of this district and its neighborhoods will have to be obtained. It's "Scarborough" in Toronto. This project will also require more information about the different districts of Scarborough, average house prices and school evaluations. Below are the required data for each neighborhood:

1. Location of the neighborhood in terms of latitude and longitude

2. Average prices of the apartments

3. School Ratings

The data set containing position data and postcodes is present in the previous project (Segmenting and Clustering Neighborhoods2.ipynb). The location of Scarborough and its neighborhoods will be obtained by filtering the available information:

https://github.com/FMelle-DataScientist/Applied-Data-Science-Capstone/blob/master/Segmenting%20and%20Clustering%20Neighborhoods2.ipynb

	Postal Code	Latitude	Longitude	Borough	Neighborhood
0	M1B	43.806686	-79.194353	Scarborough	Rouge, Malvern
1	M1C	43.784535	-79.160497	Scarborough	Highland Creek, Rouge Hill, Port Union
2	M1E	43.763573	-79.188711	Scarborough	Guildwood, Morningside, West Hill
3	M1G	43.770992	-79.216917	Scarborough	Woburn
4	M1H	43.773136	-79.239476	Scarborough	Cedarbrae
5	M1J	43.744734	-79.239476	Scarborough	Scarborough Village
6	M1K	43.727929	-79.262029	Scarborough	East Birchmount Park, Ionview, Kennedy Park
7	M1L	43.711112	-79.284577	Scarborough	Clairlea, Golden Mile, Oakridge
8	M1M	43.716316	-79.239476	Scarborough	Cliffcrest, Cliffside, Scarborough Village West
9	M1N	43.692657	-79.264848	Scarborough	Birch Cliff, Cliffside West
10	M1P	43.757410	-79.273304	Scarborough	Dorset Park, Scarborough Town Centre, Wexford ...
11	M1R	43.750071	-79.295849	Scarborough	Maryvale, Wexford
12	M1S	43.794200	-79.262029	Scarborough	Agincourt
13	M1T	43.781638	-79.304302	Scarborough	Clarks Corners, Sullivan, Tam O'Shanter
14	M1V	43.815252	-79.284577	Scarborough	Agincourt North, L'Amoreaux East, Milliken, St...
15	M1W	43.799525	-79.318389	Scarborough	L'Amoreaux West
16	M1X	43.836125	-79.205636	Scarborough	Upper Rouge

Figura 2 - Info geo-location of neighborhoods of Scarborough

Foursquare API:

I used Forsquare API to get the most common venues in different neighborhoods in a particular borough of Toronto. Foursquare is a location technology platform dedicated to improving how people move through the real world. This information contains venue names, locations, menus and even photos. For each neighborhood, I set a radius of 100 meters.

The data retrieved from Foursquare contained venues information within a certain distance from the longitude and latitude of the postcodes. The information obtained for each venue is as follows:

1. Neighborhood
2. Neighborhood Latitude

3. Neighborhood Longitude
4. Venue
5. Name of the venue e.g. the name of restaurant
6. Venue Category
7. Venue Latitude
8. Venue Longitude