Capstone Project

The Battle of Neighborhoods (Week 2)

I Introduction

Project:

A client needs recommendation for a location to live

North York or Markham in Toronto

She loves eating especially Japanese food and does not like walking

So, Priority is restaurant nearby with high rating and good review

Have schools nearby

Notebook
Link : https://github.com/qsunsauce/Coursera_Capstone/blob/master/Capstone%20week1.ipynb

Presentation Link:
https://github.com/qsunsauce/Coursera_Capstone/blob/master/Capstone%20Week%201.pptx

II Data Section

- North York

    Japanese restaurants nearby

    Restaurant rating

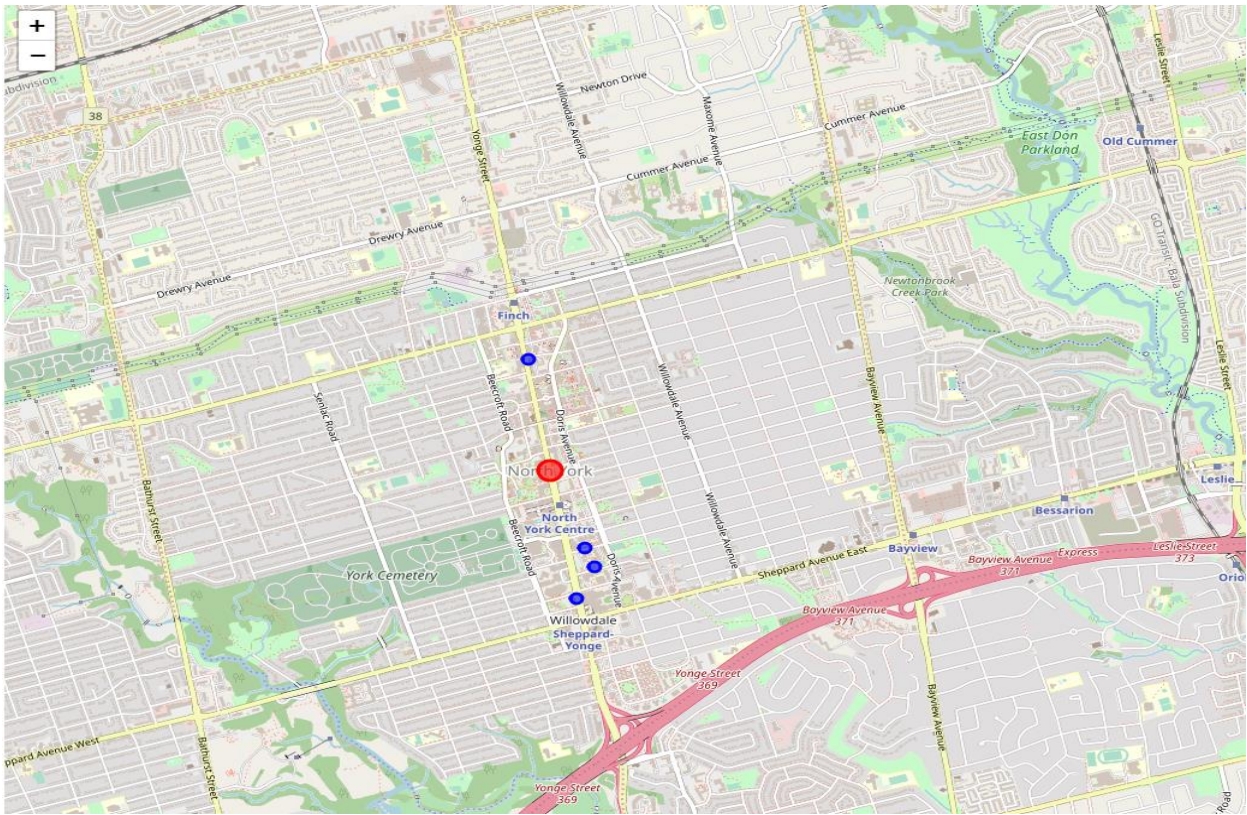   Schools nearby

- Markham

    Japanese restaurants nearby

    Restaurant rating

    Schools nearby

North York restaurants within 1000m map

4 restaurants nearby

	name	categories	address	cc	city	country	crossStreet	distance	formattedAddress	labeledLatLngs	lat	lng	postalCode	state	id
0	Kenzo Japanese Ramen House	Ramen Restaurant	4860 Yonge St.	CA	Toronto	Canada	at Sheppard Ave.	899	[4860 Yonge St. (at Sheppard Ave.), Toronto ON...	[{'label': 'display', 'lat': 43.76285050573308,...	43.762851	-79.411426	M2N 5N2	ON	4f777209e4b0df5436c04da7
1	Kiyomizu Japanese Restaurant	Japanese Restaurant	41 Spring Garden Ave.	CA	North York	Canada	at Yonge St.	715	[41 Spring Garden Ave. (at Yonge St.), North Y...	[{'label': 'display', 'lat': 43.7648196440823,...	43.764820	-79.410106	NaN	ON	4b671ac9f964a520d73a2be3
2	Hamaru Japanese Restaurant	Japanese Restaurant	5469 Yonge Street	CA	Toronto	Canada	Yonge and Finch	787	[5469 Yonge Street (Yonge and Finch), Toronto ...	[{'label': 'display', 'lat': 43.77780424649649...	43.777804	-79.414872	NaN	ON	53e7f27c498e6a14dc56f611
3	Ichiban Fish House	Japanese Restaurant	15 Spring Garden Ave.	CA	North York	Canada	at Yonge St.	572	[15 Spring Garden Ave. (at Yonge St.), North Y...	[{'label': 'display', 'lat': 43.76599495334784...	43.765995	-79.410813	M2N 3G1	ON	4b8bffc6f964a52076b732e3

Restaurant Rating

```
venue_id = '4b8bffc6f964a52076b732e3' # ID
url = 'https://api.foursquare.com/v2/venues/{}?client_id={}&client_secret={}&v={}'.format(venue_id, CLIENT_ID, CLIENT_SECRET, VERSION)

result = requests.get(url).json()
try:
    print(result['response']['venue']['rating'])
except:
    print('This venue has not been rated yet.')

5.7
```

```
venue_id = '53e7f27c498e6a14dc56f611' # ID
url = 'https://api.foursquare.com/v2/venues/{}?client_id={}&client_secret={}&v={}'.format(venue_id, CLIENT_ID, CLIENT_SECRET, VERSION)

result = requests.get(url).json()
try:
    print(result['response']['venue']['rating'])
except:
    print('This venue has not been rated yet.')

This venue has not been rated yet.
```

```
venue_id = '4f777209e4b0df5436c04da7' # ID
url = 'https://api.foursquare.com/v2/venues/{}?client_id={}&client_secret={}&v={}'.format(venue_id, CLIENT_ID, CLIENT_SECRET, VERSION)

result = requests.get(url).json()
try:
    print(result['response']['venue']['rating'])
except:
    print('This venue has not been rated yet.')

6.2
```

```
venue_id = '4b671ac9f964a520d73a2be3' # ID
url = 'https://api.foursquare.com/v2/venues/{}?client_id={}&client_secret={}&v={}'.format(venue_id, CLIENT_ID, CLIENT_SECRET, VERSION)

result = requests.get(url).json()
try:
    print(result['response']['venue']['rating'])
except:
    print('This venue has not been rated yet.')

6.5
```
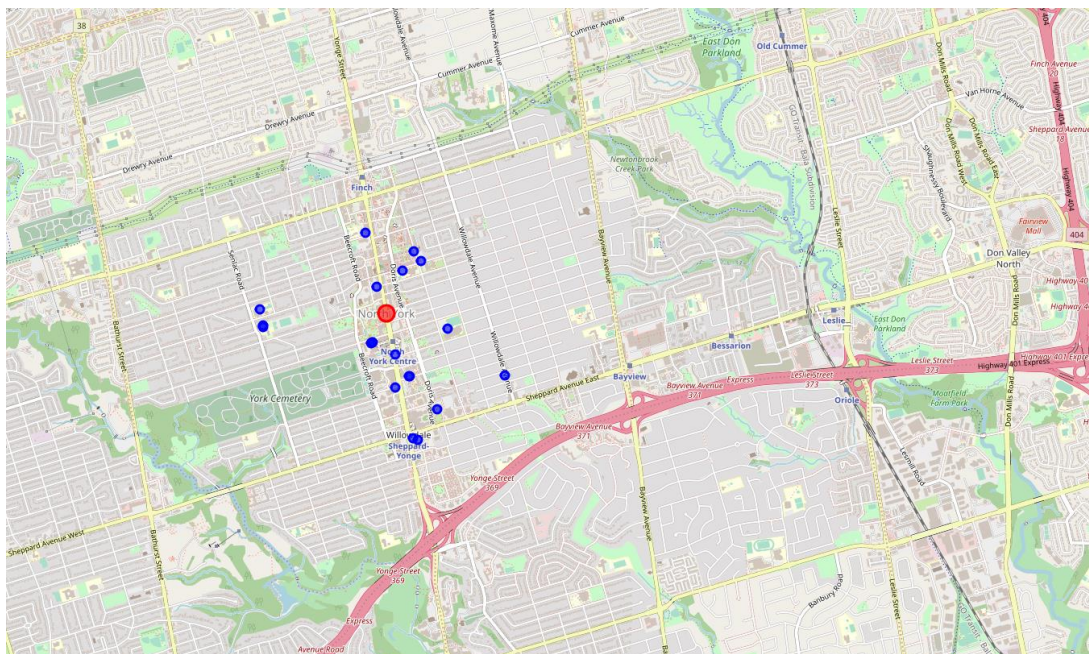
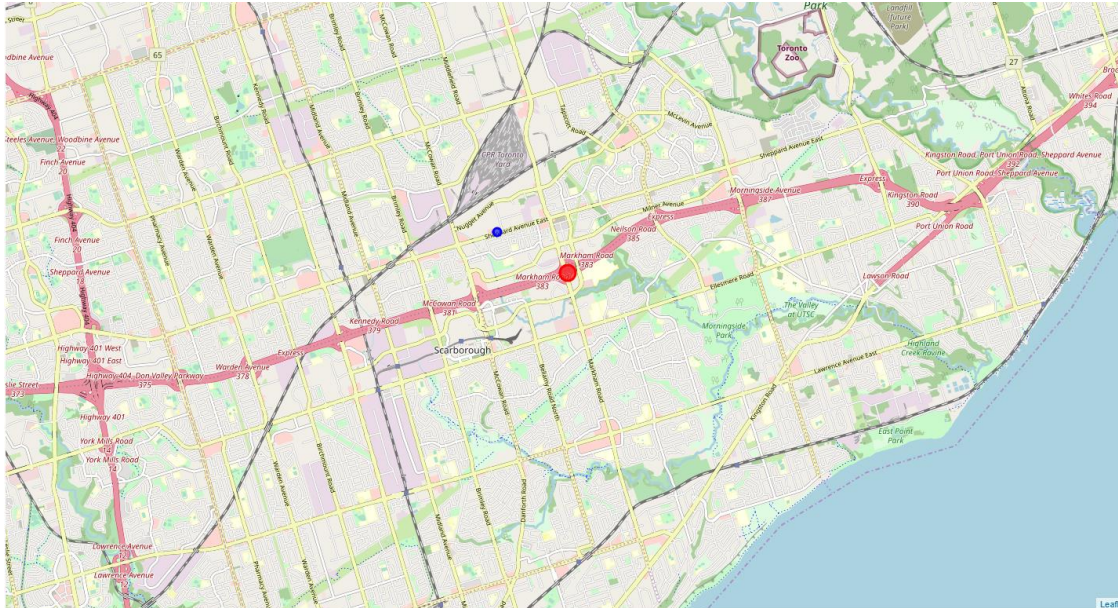North York has 4 restaurants nearby within 1000m

With the rating 5.7,6.2,6.5 and one has not been rated yet

North York school density within 1000m

Markham restaurants nearby
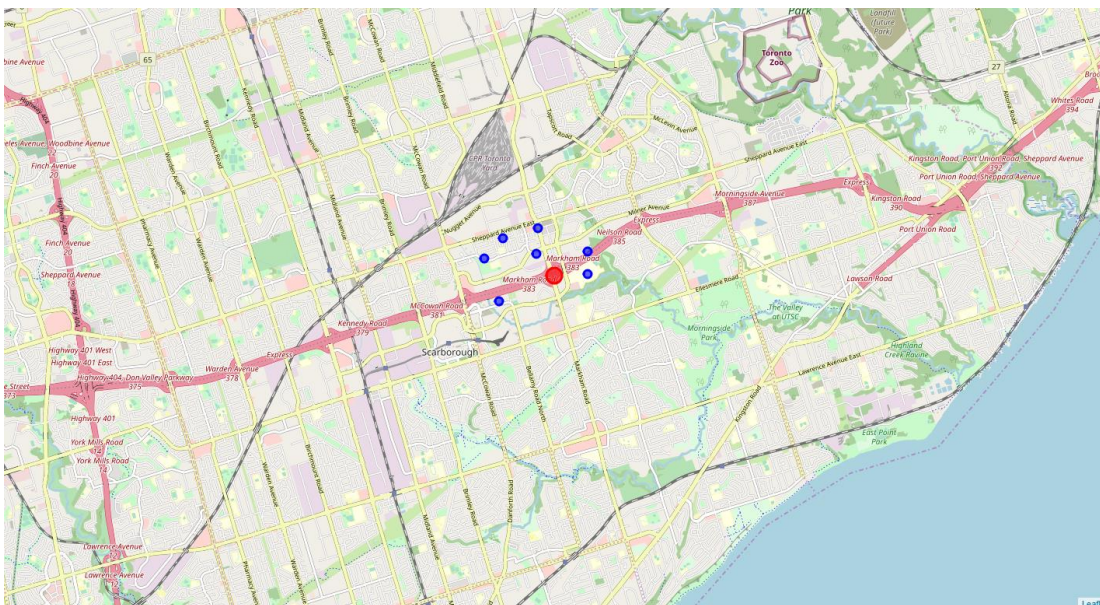

Markham restaurant rating

```
venue_id = '4ad89e97f964a520f01221e3' # ID
url = 'https://api.foursquare.com/v2/venues/{}?client_id={}&client_secret={}&v={}'.format(venue_id, CLIENT_ID, CLIENT_SECRET, VERSION)

result = requests.get(url).json()
try:
    print(result['response']['venue']['rating'])
except:
    print('This venue has not been rated yet.')
```

6.3

There is only one Japanese restaurant nearby with rating 6.3

Markham school nearby

There are only 6 schools nearby

clustering

Cluster 1 ¶

```
northyork_merged.loc[northyork_merged['Cluster Labels'] == 0, northyork_merged.columns[[1] + list(range(5, northyork_merged.shape[1]))]]
```

Cluster 2

```
markham_merged.loc[markham_merged['Cluster Labels'] == 1, markham_merged.columns[[1] + list(range(5, markham_merged.shape[1]))]]
```

Discussion

Because of the client's requirement, we need to find restaurants only within 1000m and see their rating is good. Higher school density means comfortable neighborhood so generate two maps of each area to compare them.

Result and Conclusion Section

Based on the data analysis, restaurants nearby and their ranking, schools nearby in the north York area and Markham area.

North York has 4 Japanese restaurants and Markham has only 1 restaurant within 1000m 4 restaurants' rating are fine And North York has more schools nearby

So, I would recommend living in North York area.

Thank you for your time!