Capstone project – The Battle of Neighborhoods Presentation

By Danijela Zivic

1. Introduction

- Analyze existing venues in neighborhoods between Toronto and New York City;
- select the best city in North America to visit first;
- explore and understand the similarities and dissimilarities between neighborhoods in those two cities;
- determine which neighborhoods are best fit for traveler who likes good food for reasonable price.
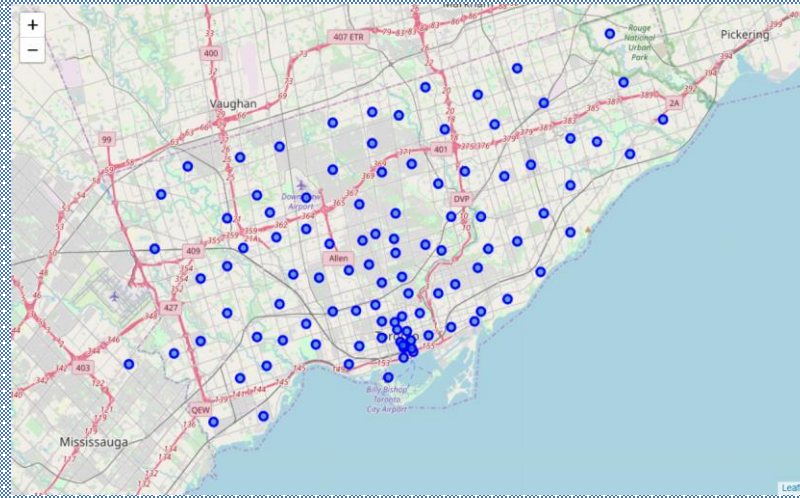
2. Data

retrieving data from:

- Toronto data from Wikipedia page
- Toronto Latitude and Longitude a csv file that has the geographical coordinates of each postal code
- New York City data, Latitude and Longitude, but better is from file placed on the server

- Colecting Neighborhood's top trending venues using API Foursquare (latitude and longitude coordinates for venues, searching for the keyword {Restaurants}, Like count, Rating, Price);
- creating Folium maps;
- based on the largest number of restaurants per neighborhood focus just on one neighborhood of each cities;
- with using machine learning models to get a list of recommended restaurants that have the most highest numbers of likes, ratings and for reasonable prices;
- bonus: provide to the traveler a list of nearby attractions;
- suggesting ideal city to visit first based on comparison between one of each neighborhood in Toronto and New York City which restaurant have the most likes.

3. Methodology

- Loaded, extracted, cleaned and processed the data;
- used API Foursquare calls to get informations about venues;
- created Folium maps;
- explored, used mashine learning models, varius python packages and functions;
- build recommendation models that sugest top 10 liked restaurants;
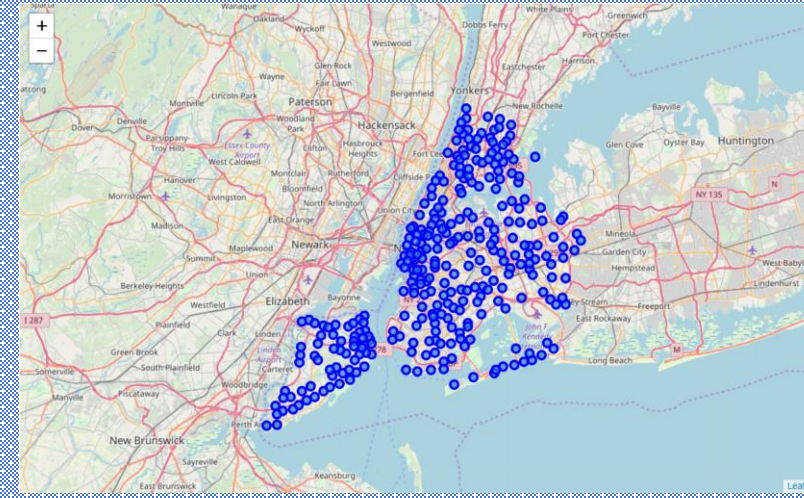- ploting bar charts to see differents between Davisville and Elmhurst.

4. Results

Toronto

New York City

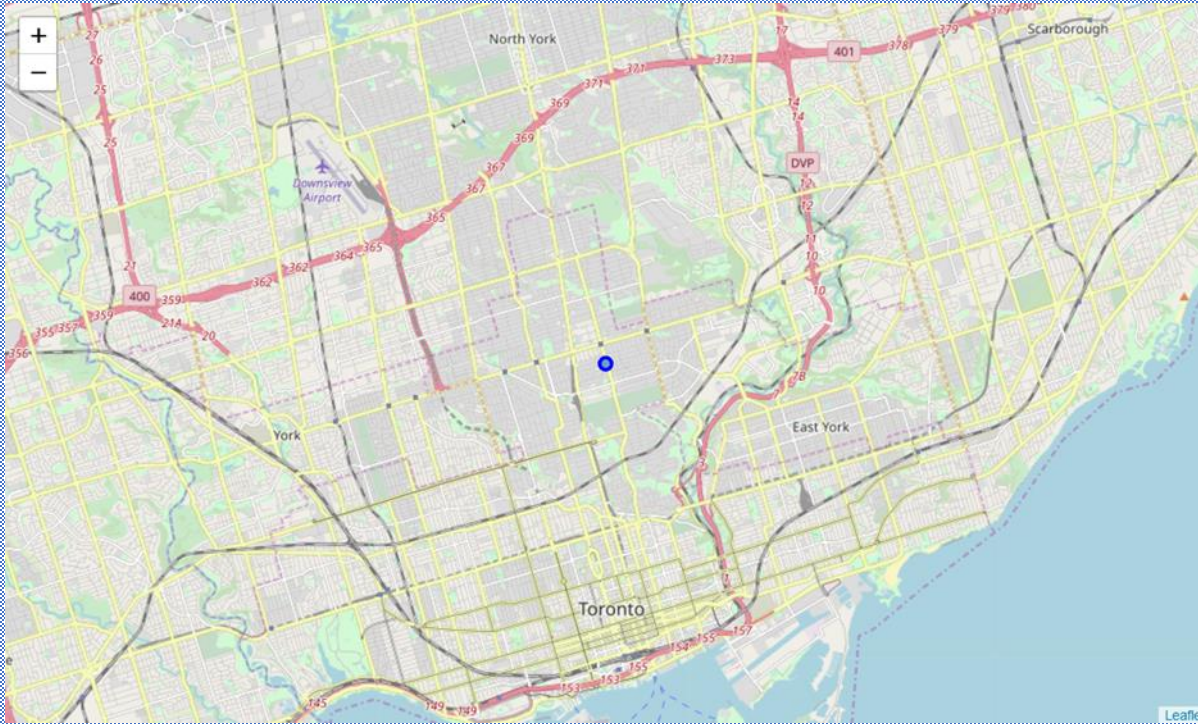4861 venues, 1213 restaurants and
329 uniques categories
in 103 neighborhoods

20487 venues, 4925 restaurants and
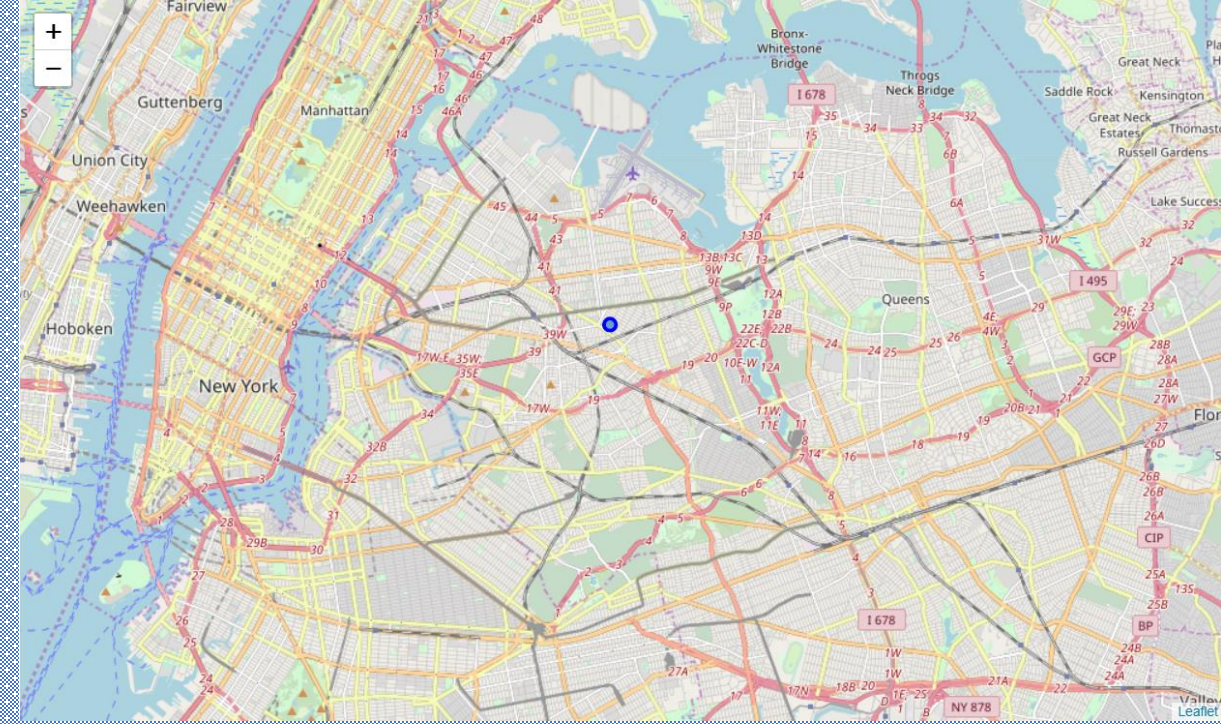464 uniques categories
in 306 neighborhoods

The most largest number of restaurants per neighborhood

with 40 restaurants is Davisville neighborhood,
Central Toronto borough in Toronto

with 60 restaurants is Elmhurst neighborhood,
Queens borough in NYC

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Number of restaurants
47	Davisville	43.704324	-79.388790	40
22	Willowdale South	43.770120	-79.408493	39
75	Christie	43.669542	-79.422564	34
41	The Danforth West, Riverdale	43.679557	-79.352188	33
52	Church and Wellesley	43.665860	-79.383160	32

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Number of restaurants
132	Elmhurst	40.744049	-73.881656	60
131	Jackson Heights	40.751981	-73.882821	56
138	Flushing	40.764454	-73.831773	47
130	Woodside	40.746349	-73.901842	43
126	Gramercy	40.737210	-73.981376	42

Neighborhood	Davisville	Elmhurst
1st Most Common Venue	Italian Restaurant	Thai Restaurant
2nd Most Common Venue	Coffee Shop	Mexican Restaurant
3rd Most Common Venue	Sushi Restaurant	Bakery
4th Most Common Venue	Indian Restaurant	Chinese Restaurant
5th Most Common Venue	Café	South American Restaurant
6th Most Common Venue	Pizza Place	Latin American Restaurant
7th Most Common Venue	Dessert Shop	Asian Restaurant
8th Most Common Venue	Restaurant	Food Truck
9th Most Common Venue	Mexican Restaurant	Bubble Tea Shop
10th Most Common Venue	Fast Food Restaurant	Vietnamese Restaurant

Davisville: found 57 uniques categories, mostly associated with a different restaurant or food - fast food/shops/places

Elmhurst: found 42 uniques categories, mosly associated with a asian restaurant or other food places

Recomendation

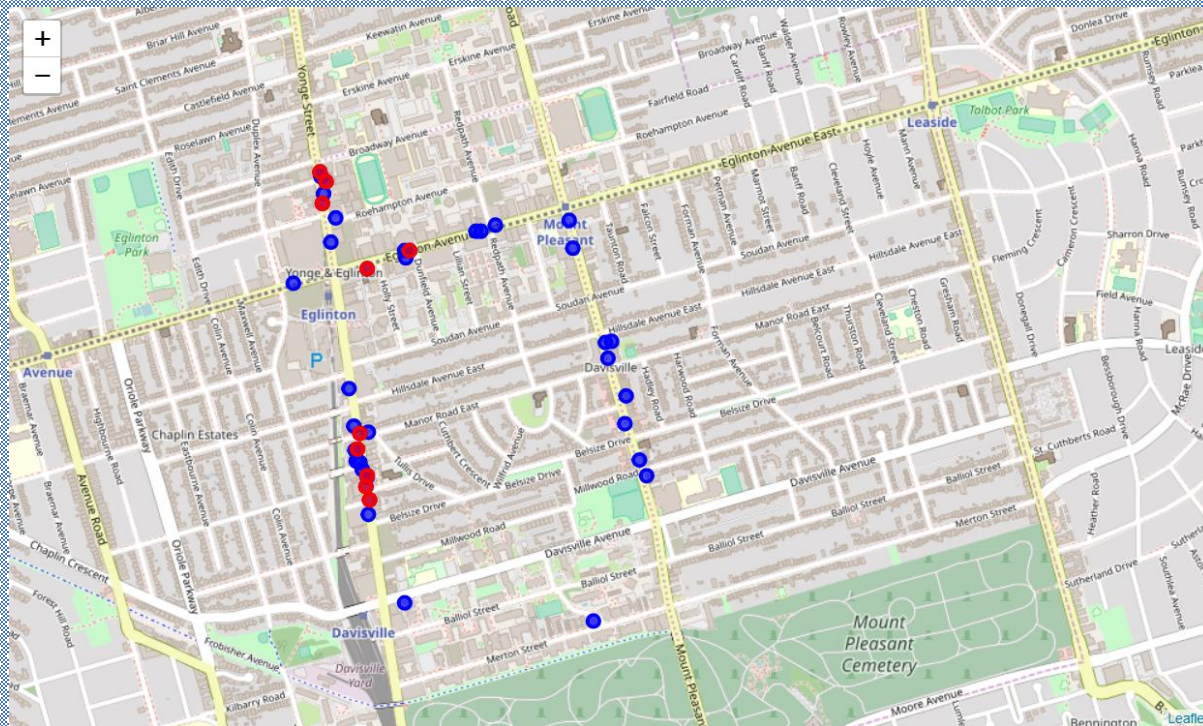|	Venue ID	Venue	Venue Category	Venue Latitude	Venue Longitude	Likes	Rating		Price
12	4ad4c061f964a520a2f720e3	Grazie Ristorante	Italian Restaurant	43.709329	-79.398823	124.0	NaN		NaN
4	521e0c6c04939a8ad55d93d3	Fresh	Vegetarian / Vegan Restaurant	43.707324	-79.395649	98.0	7.5	{'tier': 2, 'message': 'Moderate', 'currency':...	
9	4aee242ef964a52077d221e3	Tabülè	Middle Eastern Restaurant	43.700932	-79.397078	89.0	8.3	{'tier': 2, 'message': 'Moderate', 'currency':...	
6	53aca702498e3bbe34efc1bb	Little Sister	Indonesian Restaurant	43.701552	-79.397163	51.0	7.5	{'tier': 2, 'message': 'Moderate', 'currency':...	
20	4ae24e96f964a5200e8d21e3	Coquine Restaurant	French Restaurant	43.702623	-79.397429	45.0	NaN		NaN
35	50353048e4b0c42300d9c847	A&W Canada	Fast Food Restaurant	43.706837	-79.397167	37.0	NaN		NaN
22	4ad4c060f964a5207ef720e3	Echo Sushi	Sushi Restaurant	43.701276	-79.397192	36.0	NaN		NaN
15	4b6b758ff964a520270a2ce3	Five Doors North	Italian Restaurant	43.702236	-79.397526	30.0	NaN		NaN
31	4b01ef6ef964a520ad4622e3	Sushi Rock Café	Sushi Restaurant	43.709089	-79.398641	29.0	NaN		NaN
14	53865482498edb61054992bd	Star King	Vietnamese Restaurant	43.708519	-79.398764	25.0	NaN		NaN

Davisville
Grazie Ristorante – Italian Restaurant
have 124 likes
Tabülè - Middle Eastern Restaurant
most promising restaurant with 8.3 rate.

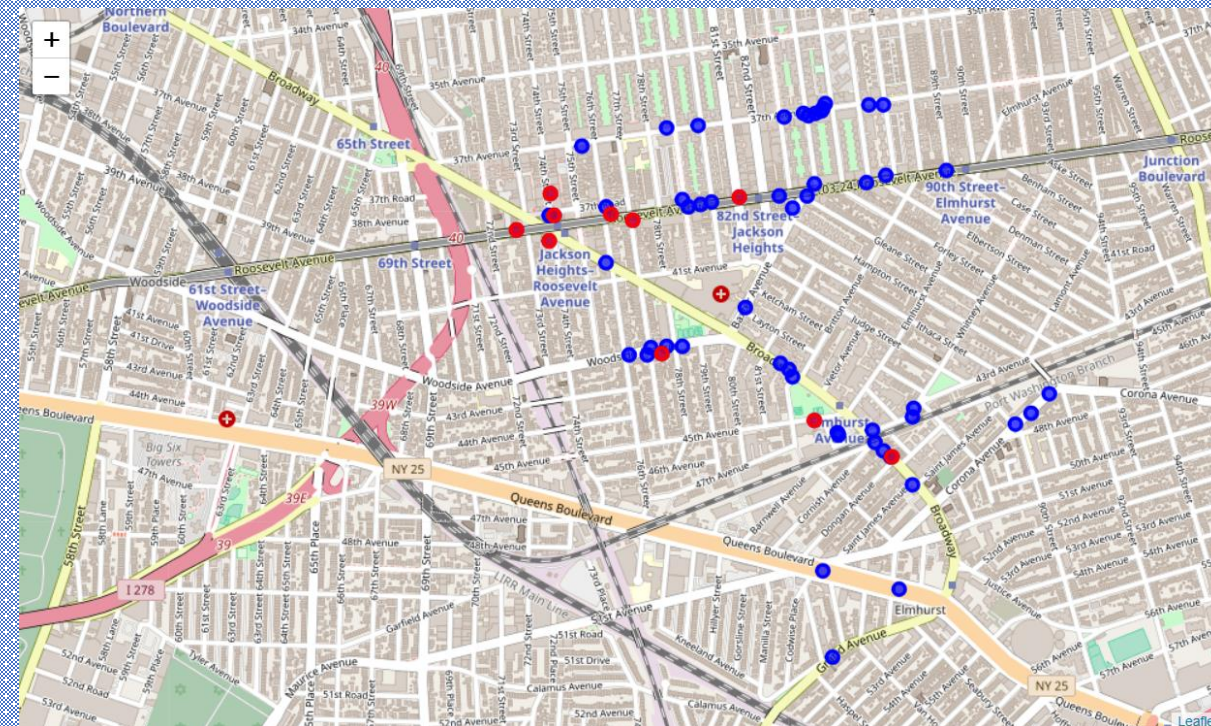|	Venue ID	Venue	Venue Category	Venue Latitude	Venue Longitude	Likes	Rating		Price
3	4e0f605462e1d5a30d0ab7ff	JoJu	Vietnamese Restaurant	40.740689	-73.879389	277.0	8.8	{'tier': 2, 'message': 'Moderate', 'currency':...	
8	4b26f895f964a5209d8324e3	Ayada Thai	Thai Restaurant	40.743469	-73.887552	272.0	8.7	{'tier': 1, 'message': 'Cheap', 'currency': '$'}	
37	4db3747a1e7248d1358dc5c8	Phayul	Asian Restaurant	40.747165	-73.891373	151.0	NaN		NaN
10	4bd2b6ef9854d13abe3afc4d	Pollos a la Brasa Mario	South American Restaurant	40.747659	-73.884806	145.0	NaN		NaN
56	3fd66200f964a52009f11ee3	Jackson Diner	Indian Restaurant	40.747753	-73.891517	137.0	NaN		NaN
54	4ab56c26f964a520867420e3	Himalayan Yak	Tibetan Restaurant	40.746767	-73.892697	115.0	NaN		NaN
46	4b4d2b63f964a52032cd26e3	Thai Son	Vietnamese Restaurant	40.746463	-73.891562	112.0	NaN		NaN
1	4aa58ef5f964a520cc4820e3	Taste Good Malaysian Cuisine 好味	Malay Restaurant	40.741663	-73.882177	110.0	9.3	{'tier': 2, 'message': 'Moderate', 'currency':...	
33	466a4c63f964a52099471fe3	Taqueria Coatzingo	Mexican Restaurant	40.747188	-73.889374	105.0	NaN		NaN
26	53af195d498e0a4a49420b68	Areperia Arepa Lady	Arepa Restaurant	40.747016	-73.888591	98.0	NaN		NaN

Elmhurst
JoJu -Vietnamese Restaurant
have 277 likes
Taste Good Malaysian Cuisine –
Malay Restaurant
most promising restaurant with 9.3 rate

Visualizing top 10 restaurants by likes (red marks) and other restaurants (blue marks)
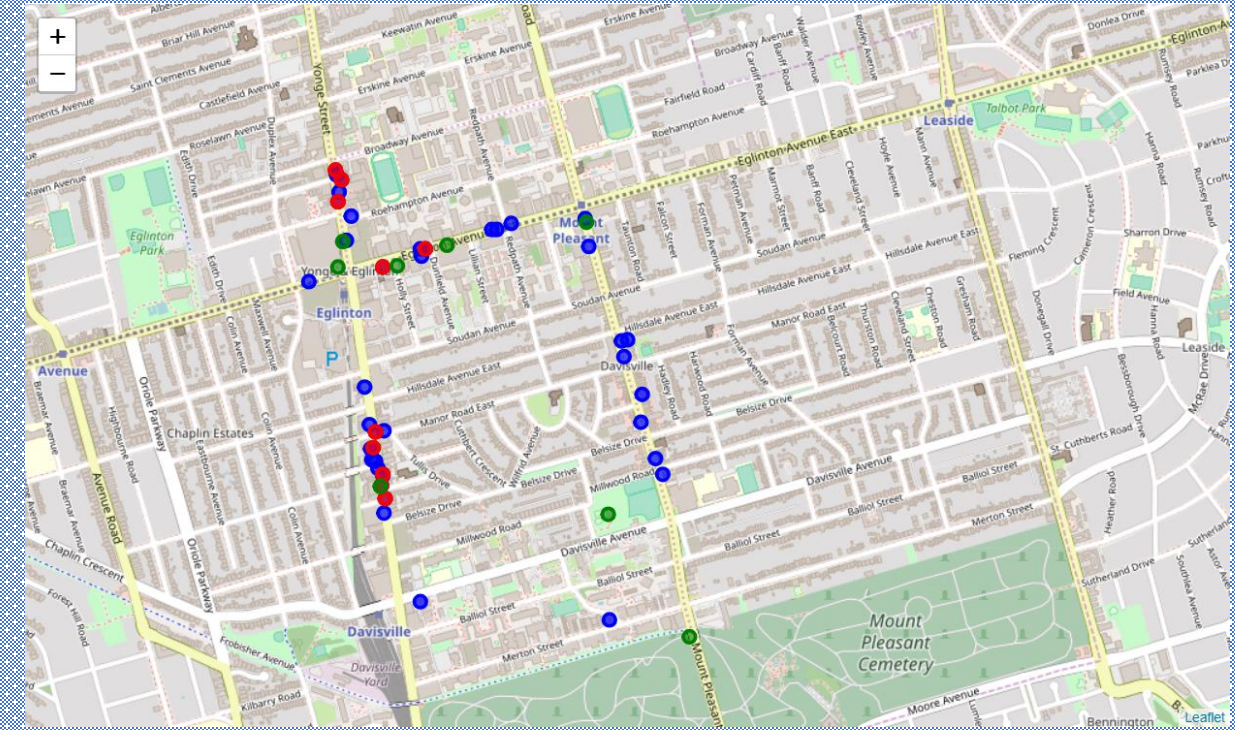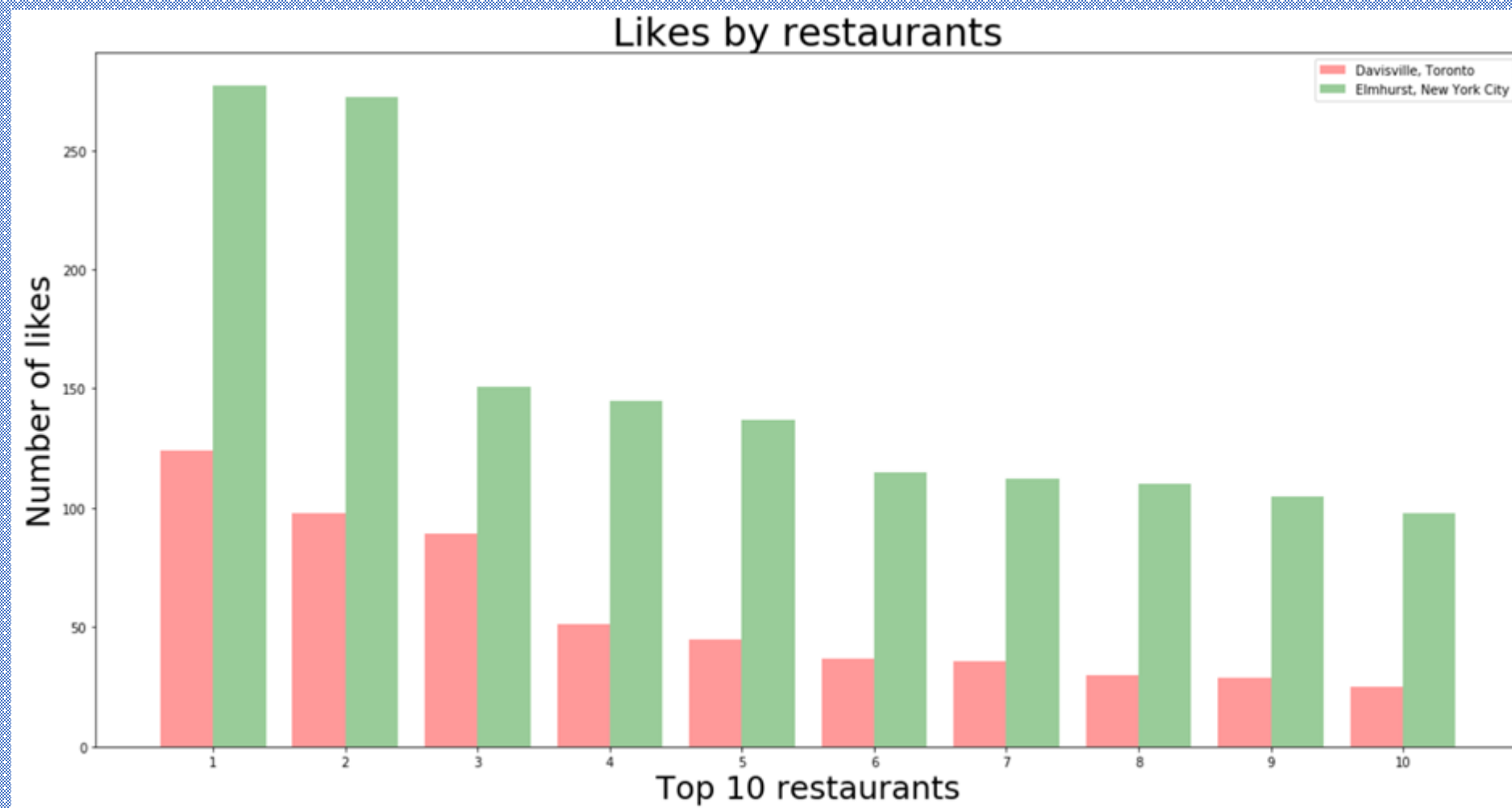

Davisville

Elmhurst

	Venue	Venue Latitude	Venue Longitude	Venue Category
6	June Rowlands Park	43.700517	-79.389189	Park
8	Loblaws	43.707412	-79.394909	Supermarket
13	Granite Brewery	43.707991	-79.389943	Brewery
33	Yonge Eglinton Square	43.706864	-79.398751	Plaza
38	Mysteriously Yours, Mystery Dinner Theatre	43.701222	-79.397251	General Entertainment
59	Mount Pleasant Cemetery	43.697384	-79.386286	Cemetery
65	Cineplex Cinemas Yonge-Eglinton	43.707500	-79.398601	Movie Theater
74	Snakes & Lattes	43.706879	-79.396646	Gaming Cafe

Attractions (green marks) with restaurants (red and blue marks) in Davisville neighborhood.

Elmhurst neighborhood had no nearby attractions, just tea rooms, coffee shops and bars to spend some time for relaxing and resting. In the nearby neighborhood is a big park and Inside a few Cemeterys, a few minutes walk away. Otherwise need to go to Manhattan to see the bigest and most popular attractions.

comparison between one of each neighborhood in Toronto and New York City which restaurant have the most likes

5. Discussion

- Toronto has 4861 venues, 329 uniques categories and 103 neighborhoods, which has 1213 restaurants. With 40 restaurants is Davisville neighborhood the most largest numbered restaurants per neighborhood.

- New York City has 20487 venues, 464 uniques categories and 306 neighborhoods, which has 4925 restaurants. With 60 restaurants is Elmhurst neighborhood the most largest numbered restaurants per neighborhood.

- Based on 124 likes that have Grazie Ristorante – Toronto Italian Restaurant and 277 likes that have JoJu – New York City Vietnamese Restaurant is JoJu most popular restaurant. All New York City restaurants have more likes than Toronto restaurants.

6. Conclusion

- We recommend the traveler from Europe to visit New York City first;

- for the best experience and enjoyment of visits to restaurants and nearby attractions;

- Elmhurst offer way more restaurants then Davisville.

Thank you