CAPSTONE PROJECT: COFFEE SHOP IN TORONTO

Aim of the project

- Navigate entrepreneurs and help them finding the most frequent venue types so that they would be able to make appropriate decision on launching coffee shop.

- Explore different venue types and finding the most common ones for specified neighborhood.

Data preparation

▶ Data that contains postal codes of Toronto's boroughs was scraped from here.

▶ Coordinates dataframe was retrieved from here.

▶ In total, new dataframe with 103 rows to 5 columns was created.

List of venues for boroughs

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In [15]:    nyork_venues = getNearbyVenues(names=nyork_data['Neighborhood'],
                                           latitudes=nyork_data['Latitude'],
                                           longitudes=nyork_data['Longitude'],)


            downtown_venues = getNearbyVenues(names=downtown_data['Neighborhood'],
                                              latitudes=downtown_data['Latitude'],
                                              longitudes=downtown_data['Longitude'],)

            etob_venues = getNearbyVenues(names=etob_data['Neighborhood'],
                                          latitudes=etob_data['Latitude'],
                                          longitudes=etob_data['Longitude'],)
```

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Parkwoods
Victoria Village
Lawrence Manor / Lawrence Heights
Don Mills
Glencairn
Don Mills
Hillcrest Village
Bathurst Manor / Wilson Heights / Downsview North
Fairview / Henry Farm / Oriole
Northwood Park / York University
Bayview Village
Downsview
York Mills / Silver Hills
Downsview
North Park / Maple Leaf Park / Upwood Park
Humber Summit
Willowdale / Newtonbrook
Downsview
Bedford Park / Lawrence Manor East
Humberlea / Emery
```

Common venues in North York

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Bathurst Manor / Wilson Heights / Downsview North	Bank	Coffee Shop	Supermarket	Pizza Place	Bridal Shop
1	Bayview Village	Japanese Restaurant	Chinese Restaurant	Café	Bank	Electronics Store
2	Bedford Park / Lawrence Manor East	Restaurant	Sandwich Place	Coffee Shop	Italian Restaurant	Sushi Restaurant
3	Don Mills	Restaurant	Beer Store	Asian Restaurant	Coffee Shop	Japanese Restaurant
4	Downsview	Grocery Store	Park	Liquor Store	Gym / Fitness Center	Baseball Field
5	Fairview / Henry Farm / Oriole	Clothing Store	Coffee Shop	Fast Food Restaurant	Japanese Restaurant	Bakery
6	Glencairn	Japanese Restaurant	Playground	Bakery	Pub	Discount Store
7	Hillcrest Village	Dog Run	Golf Course	Pool	Mediterranean Restaurant	Discount Store
8	Humber Summit	Pizza Place	Empanada Restaurant	Women's Store	Discount Store	Concert Hall
9	Humberlea / Emery	Food Service	Baseball Field	Women's Store	Electronics Store	Construction & Landscaping
10	Lawrence Manor / Lawrence Heights	Clothing Store	Women's Store	Shoe Store	Boutique	Coffee Shop
11	North Park / Maple Leaf Park / Upwood Park	Construction & Landscaping	Bakery	Park	Women's Store	Dog Run
12	Northwood Park / York University	Coffee Shop	Metro Station	Caribbean Restaurant	Massage Studio	Bar
13	Parkwoods	Park	Food & Drink Shop	Fireworks Store	Discount Store	Comfort Food Restaurant
14	Victoria Village	Coffee Shop	Grocery Store	Hockey Arena	Portuguese Restaurant	Nail Salon
15	Willowdale	Coffee Shop	Ramen Restaurant	Pizza Place	Restaurant	Grocery Store
16	York Mills / Silver Hills	Park	Cafeteria	Women's Store	Concert Hall	Construction & Landscaping
17	York Mills West	Convenience Store	Bank	Bar	Park	Women's Store

Common venues in Downtown Toronto

Out[76]:

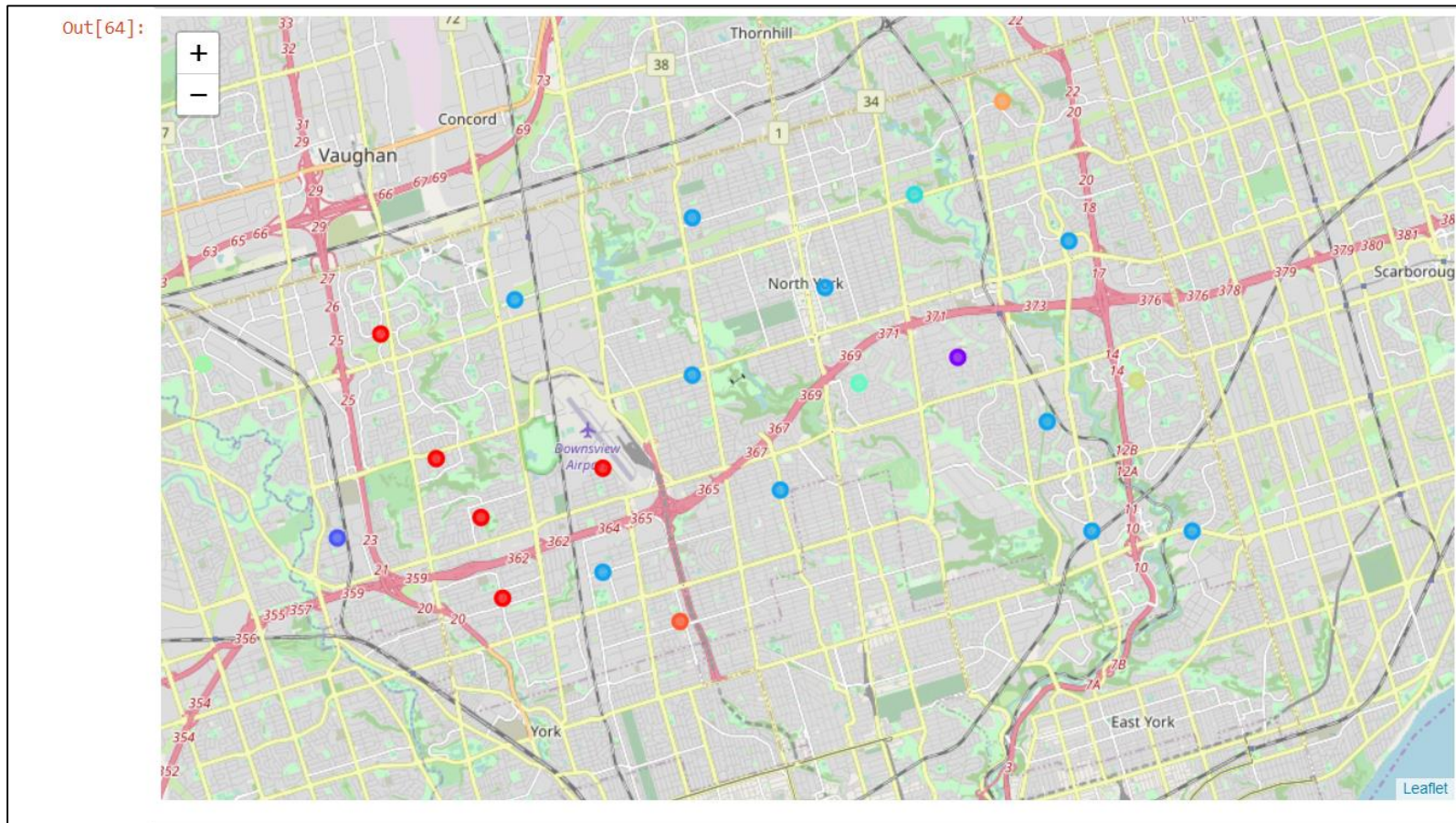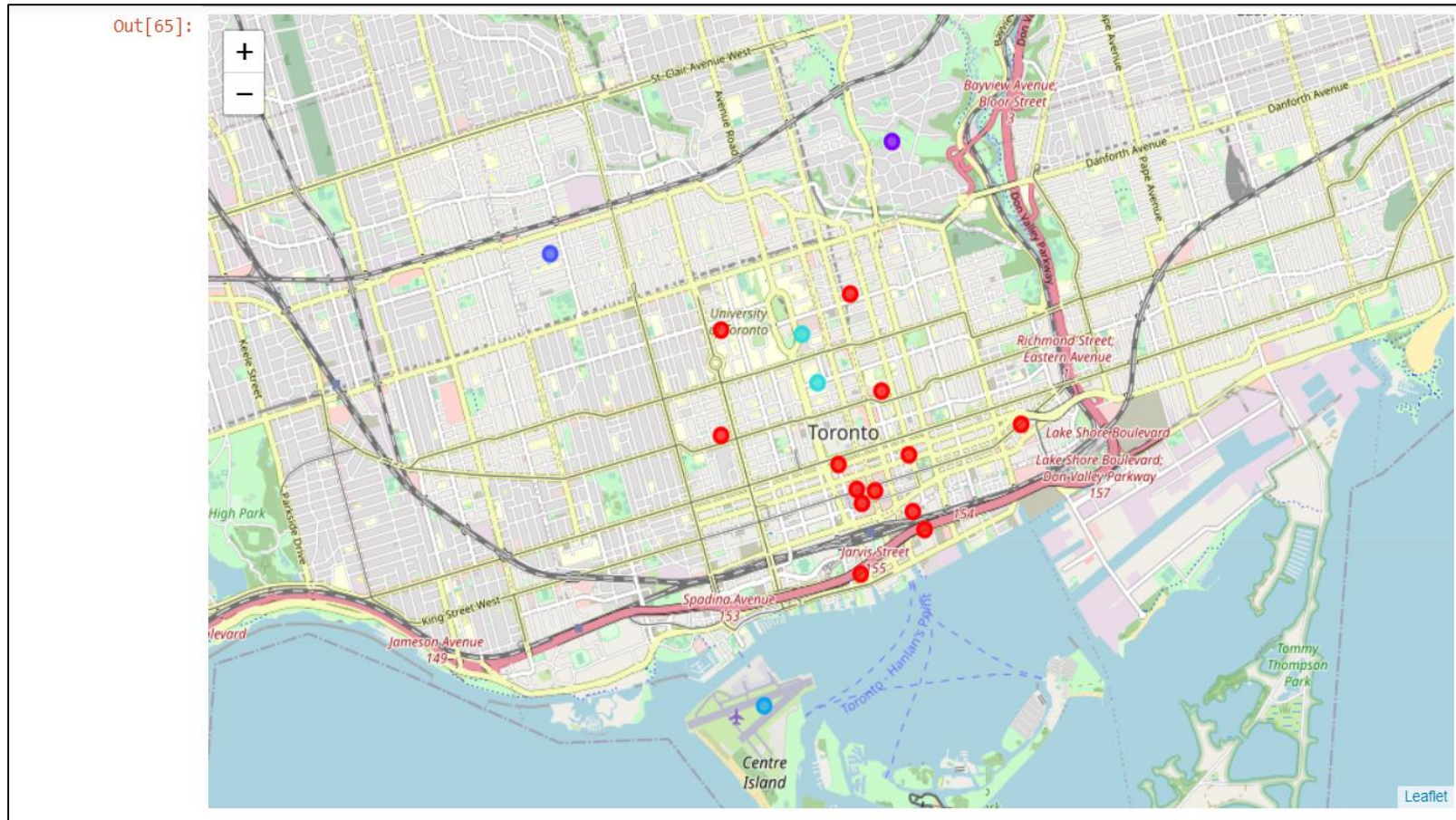|	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Berczy Park	Coffee Shop	Cocktail Bar	Beer Bar	Farmers Market	Bakery
1	CN Tower / King and Spadina / Railway Lands / ...	Airport Service	Airport Lounge	Airport Terminal	Boat or Ferry	Harbor / Marina
2	Central Bay Street	Coffee Shop	Italian Restaurant	Café	Sandwich Place	Salad Place
3	Christie	Grocery Store	Café	Park	Athletics & Sports	Gas Station
4	Church and Wellesley	Coffee Shop	Sushi Restaurant	Japanese Restaurant	Restaurant	Hotel
5	Commerce Court / Victoria Hotel	Coffee Shop	Restaurant	Café	Hotel	Gym
6	First Canadian Place / Underground city	Coffee Shop	Café	Restaurant	Hotel	Gym
7	Garden District, Ryerson	Coffee Shop	Clothing Store	Café	Cosmetics Shop	Japanese Restaurant
8	Harbourfront East / Union Station / Toronto Is...	Coffee Shop	Aquarium	Italian Restaurant	Restaurant	Café
9	Kensington Market / Chinatown / Grange Park	Café	Coffee Shop	Vietnamese Restaurant	Dessert Shop	Mexican Restaurant
10	Queen's Park / Ontario Provincial Government	Coffee Shop	Diner	Sushi Restaurant	Gym	Mexican Restaurant
11	Regent Park / Harbourfront	Coffee Shop	Bakery	Park	Pub	Restaurant
12	Richmond / Adelaide / King	Coffee Shop	Café	Restaurant	Gym	Thai Restaurant
13	Rosedale	Park	Trail	Playground	Cupcake Shop	Donut Shop
14	St. James Town	Café	Coffee Shop	Italian Restaurant	Gastropub	Cocktail Bar
15	St. James Town / Cabbagetown	Coffee Shop	Italian Restaurant	Market	Restaurant	Café
16	Stn A PO Boxes	Coffee Shop	Italian Restaurant	Café	Seafood Restaurant	Hotel
17	Toronto Dominion Centre / Design Exchange	Coffee Shop	Hotel	Café	Restaurant	Japanese Restaurant
18	University of Toronto / Harbord	Café	Italian Restaurant	Restaurant	Bar	Japanese Restaurant

Common venues in Etobicoke

Out[78]:

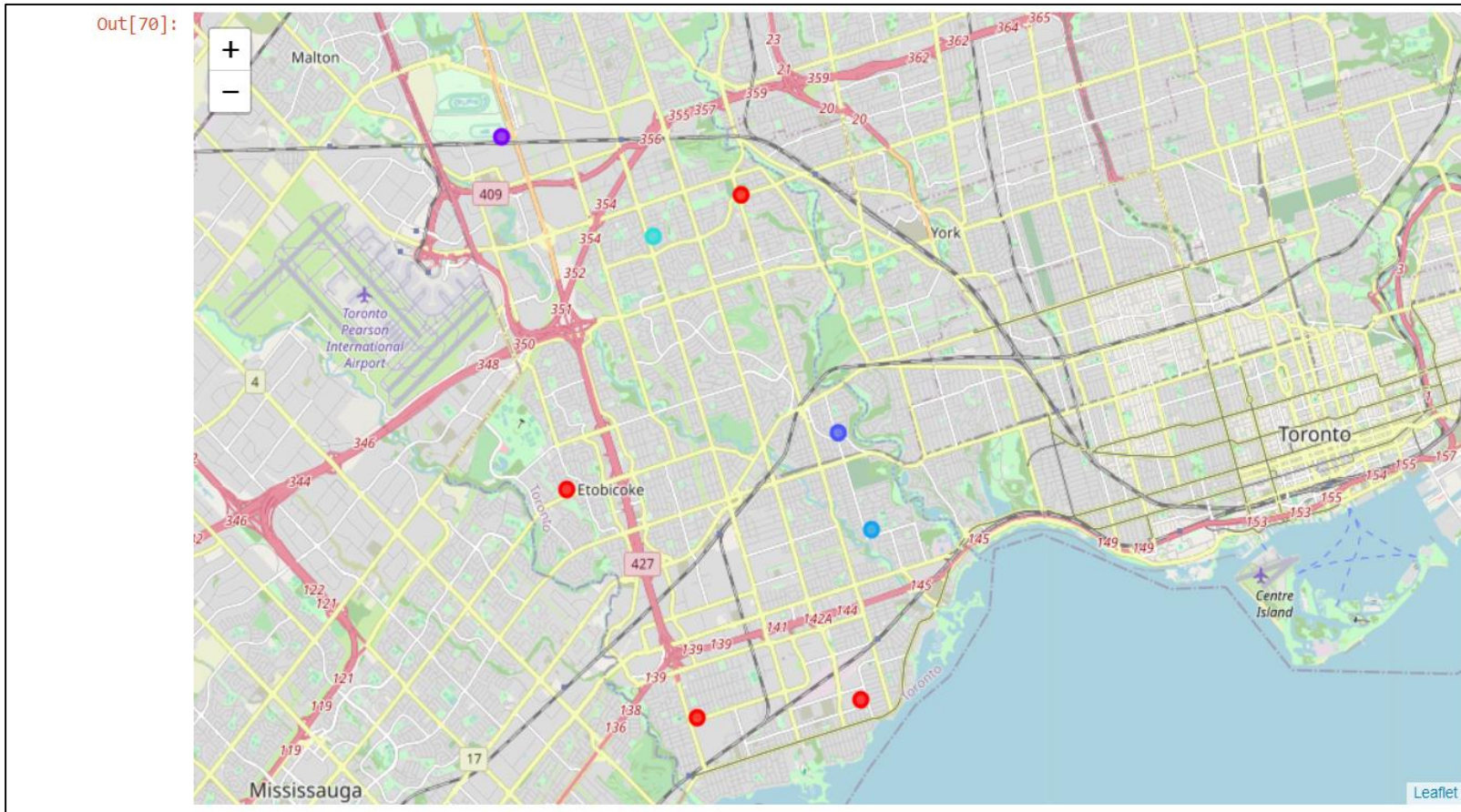|	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Alderwood / Long Branch	Pizza Place	Pharmacy	Athletics & Sports	Skating Rink	Gym
1	Eringate / Bloordale Gardens / Old Burnhamthor...	Pizza Place	Pet Store	Beer Store	Liquor Store	Cosmetics Shop
2	Kingsview Village / St. Phillips / Martin Grov...	Sandwich Place	Mobile Phone Shop	Pizza Place	Park	Wings Joint
3	Mimico NW / The Queensway West / South of Bloo...	Wings Joint	Kids Store	Bakery	Burger Joint	Burrito Place
4	New Toronto / Mimico South / Humber Bay Shores	Café	American Restaurant	Pizza Place	Gym	Liquor Store
5	Northwest	Drugstore	Rental Car Location	Wings Joint	Chinese Restaurant	Fried Chicken Joint
6	Old Mill South / King's Mill Park / Sunnylea /...	Baseball Field	Breakfast Spot	Locksmith	Construction & Landscaping	Wings Joint
7	South Steeles / Silverstone / Humbergate / Jam...	Grocery Store	Pizza Place	Fast Food Restaurant	Discount Store	Japanese Restaurant
8	The Kingsway / Montgomery Road / Old Mill North	River	Pool	Park	Wings Joint	Chinese Restaurant
9	Westmount	Pizza Place	Chinese Restaurant	Intersection	Sandwich Place	Discount Store

Moderate distance between clusters in North York

Close vicinity of clusters in Downtown Toronto

Loose distance between Etobicoke's clusters

Conclusion

▶ Downtown Toronto is the most populated with coffee shops within 3 boroughs.

▶ North York, has moderate cluster location, has 8 coffee shops presented in different neighborhoods.

▶ Etobicoke on the other hand, has no coffee shops listed within top 5 most common venues for neighborhoods, add the fact that it has close location to Ontario Lake as well, yields us Etobicoke as the optimal place for new coffee shop.