

COURSERA CAPSTONE FINAL PROJECT

Battle for the neighborhood
Toronto, Canada

A Chinese company want to establish a branch office in Toronto Downtown



Data Source

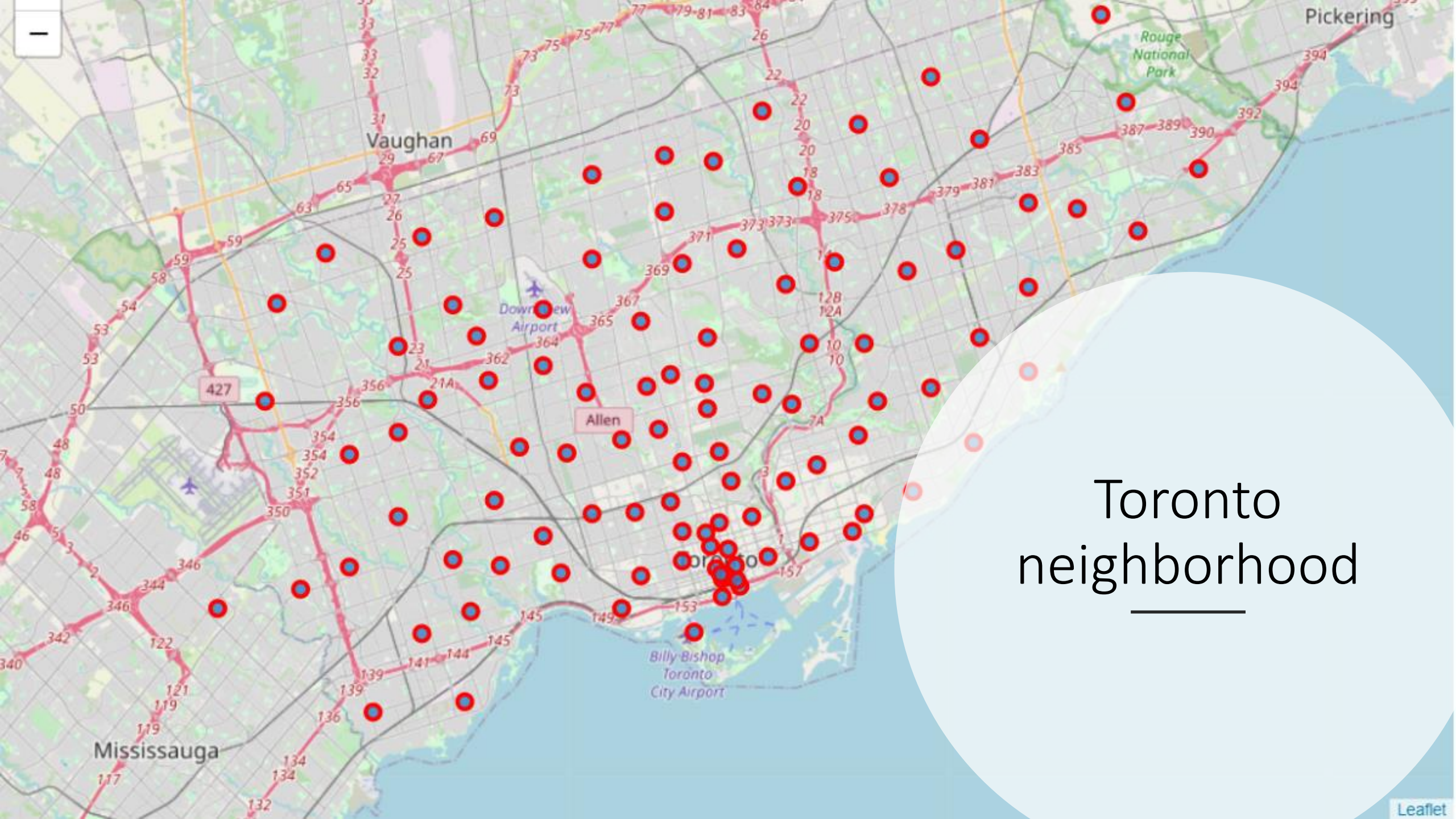
Toronto Neighborhoods –

https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

Toronto Latitude and Longitude - http://coc1.us/Geospatial_data

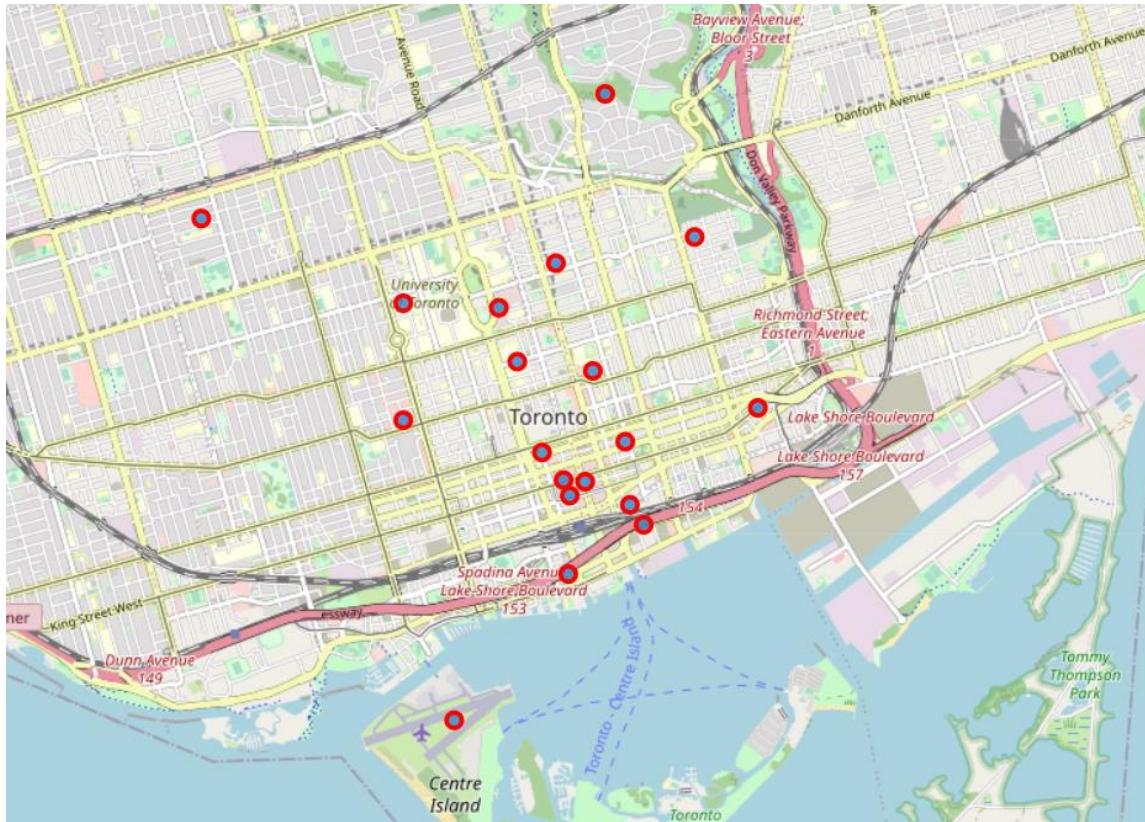
Adding Geographical information to the data

| | PostalCode | Borough | | Neighborhood | Latitude | Longitude |
|---|------------|-------------|--|----------------|-----------|------------|
| 0 | M1B | Scarborough | | Malvern, Rouge | 43.806686 | -79.194353 |
| 1 | M1C | Scarborough | Rouge Hill, Port Union, Highland Creek | | 43.784535 | -79.160497 |
| 2 | M1E | Scarborough | Guildwood, Morningside, West Hill | | 43.763573 | -79.188711 |
| 3 | M1G | Scarborough | | Woburn | 43.770992 | -79.216917 |
| 4 | M1H | Scarborough | | Cedarbrae | 43.773136 | -79.239476 |



Toronto
neighborhood

Segmenting Downtown Toronto Borough



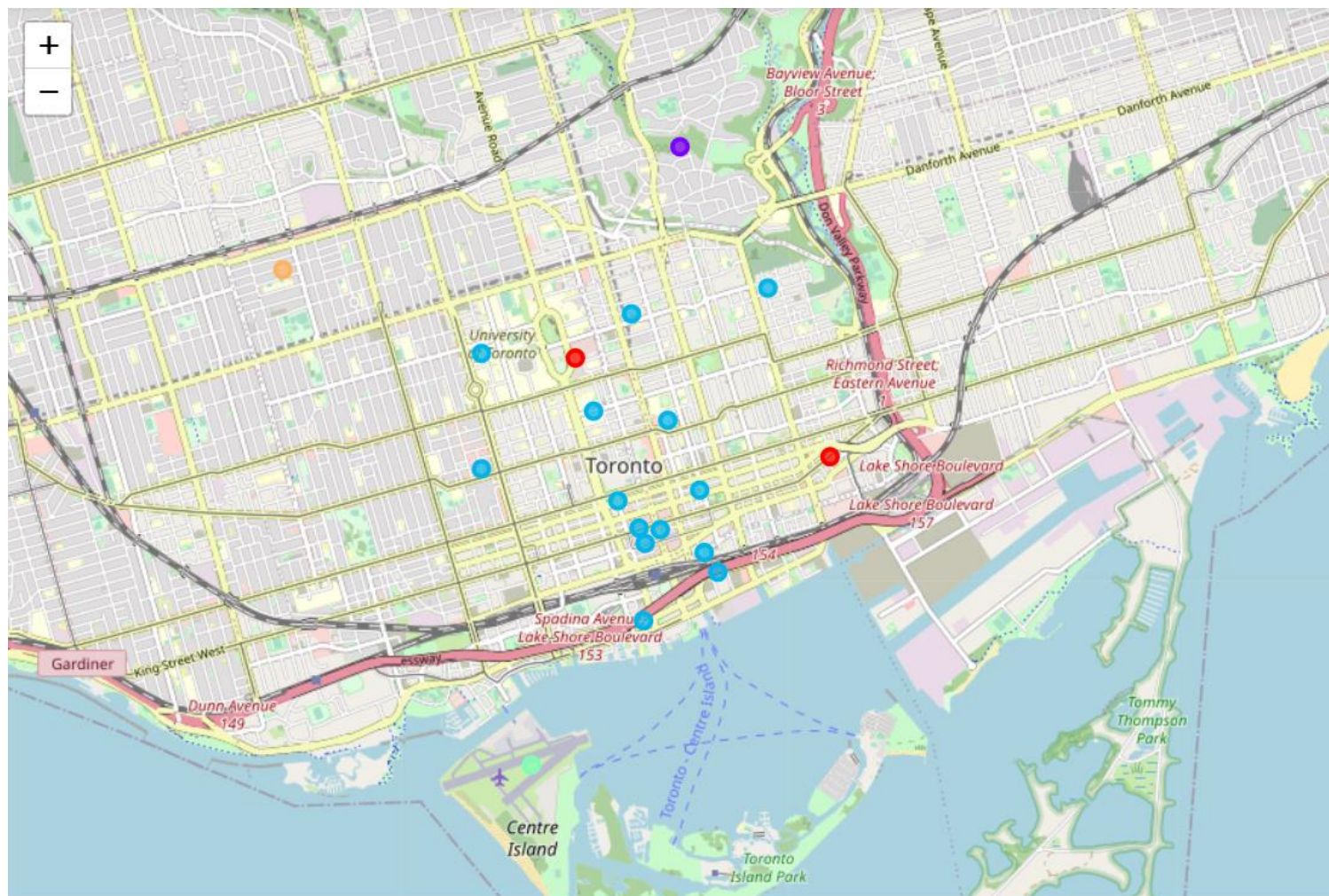
| | PostalCode | Borough | Neighborhood | Latitude | Longitude |
|---|------------|------------------|-----------------------------|-----------|------------|
| 0 | M4W | Downtown Toronto | Rosedale | 43.679563 | -79.377529 |
| 1 | M4X | Downtown Toronto | St. James Town, Cabbagetown | 43.667967 | -79.367675 |
| 2 | M4Y | Downtown Toronto | Church and Wellesley | 43.665860 | -79.383160 |
| 3 | M5A | Downtown Toronto | Regent Park, Harbourfront | 43.654260 | -79.360636 |
| 4 | M5B | Downtown Toronto | Garden District, Ryerson | 43.657162 | -79.378937 |

Adding Geographical information to the Downtown Toronto Neighborhood Venues

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue | Venue Latitude | Venue Longitude | Venue Category |
|---|--------------|-----------------------|------------------------|----------------------|----------------|-----------------|----------------|
| 0 | Rosedale | 43.679563 | -79.377529 | Rosedale Park | 43.682328 | -79.378934 | Playground |
| 1 | Rosedale | 43.679563 | -79.377529 | Whitney Park | 43.682036 | -79.373788 | Park |
| 2 | Rosedale | 43.679563 | -79.377529 | Rosedale Tennis Club | 43.683226 | -79.378984 | Tennis Court |
| 3 | Rosedale | 43.679563 | -79.377529 | Alex Murray Parkette | 43.678300 | -79.382773 | Park |
| 4 | Rosedale | 43.679563 | -79.377529 | Milkman's Lane | 43.676352 | -79.373842 | Trail |

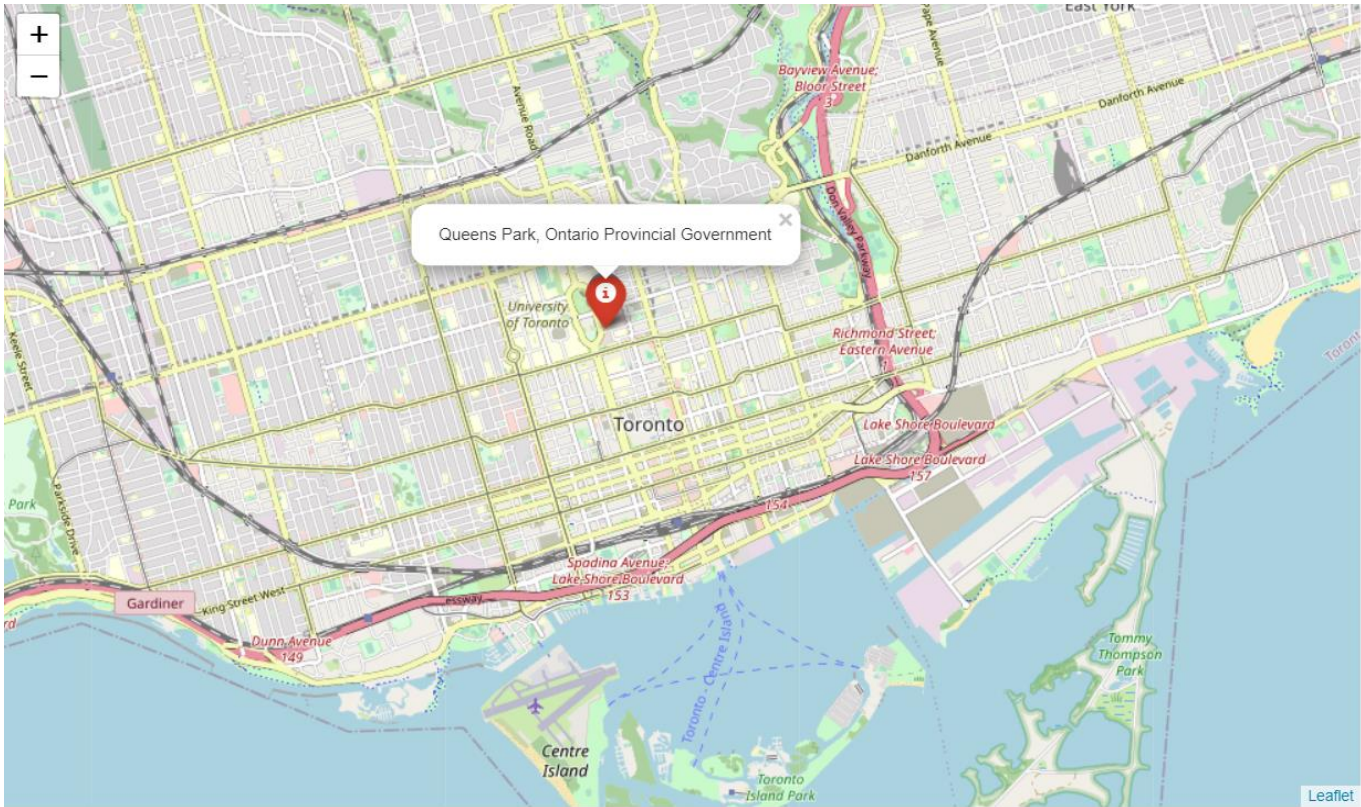
Checking the top 10 venues of each Neighborhood

| | Neighborhood | 1st Most Common Venue | 2nd Most Common Venue | 3rd Most Common Venue | 4th Most Common Venue | 5th Most Common Venue | 6th Most Common Venue | 7th Most Common Venue | 8th Most Common Venue | 9th Most Common Venue | 10th Most Common Venue |
|---|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
| 0 | Berczy Park | Coffee Shop | Bakery | Cocktail Bar | Seafood Restaurant | Cheese Shop | Beer Bar | Farmers Market | Restaurant | Sandwich Place | Breakfast Spot |
| 1 | CN Tower, King and Spadina, Railway Lands, Har... | Airport Lounge | Airport Service | Bar | Harbor / Marina | Rental Car Location | Coffee Shop | Boat or Ferry | Historic Site | Sculpture Garden | Airport Terminal |
| 2 | Central Bay Street | Coffee Shop | Café | Italian Restaurant | Sandwich Place | Japanese Restaurant | Thai Restaurant | Department Store | Salad Place | Burger Joint | Bubble Tea Shop |
| 3 | Christie | Grocery Store | Café | Park | Athletics & Sports | Baby Store | Coffee Shop | Nightclub | Candy Store | Italian Restaurant | Restaurant |
| 4 | Church and Wellesley | Coffee Shop | Gay Bar | Japanese Restaurant | Sushi Restaurant | Restaurant | Yoga Studio | Hotel | Men's Store | Café | Bubble Tea Shop |



Clustering the
Neighborhood

Selecting the Neighborhood



| Neighborhood | Latitude | Longitude | Cluster Labels | 1st Most Common Venue | 2nd Most Common Venue | 3rd Most Common Venue | 4th Most Common Venue | 5th Most Common Venue | 6th Most Common Venue | 7th Most Common Venue | 8th Most Common Venue | 9th Most Common Venue | 10th Most Common Venue |
|---|-----------|------------|----------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
| St. James Town, Cabbagetown | 43.667967 | -79.367675 | 2 | Coffee Shop | Café | Pizza Place | Restaurant | Pub | Chinese Restaurant | Market | Bakery | Park | Italian Restaurant |
| Queen's Park, Ontario Provincial Government | 43.662301 | -79.389494 | 0 | Coffee Shop | Yoga Studio | Chinese Restaurant | Sandwich Place | Diner | Music Venue | Beer Bar | Italian Restaurant | Smoothie Shop | Portuguese Restaurant |

THANK YOU