

Introduction :

Toronto is not only a beautiful city but also one of the most multi-cultural cities in the world . If you consider the demographics of Toronto , it has established ethnic neighborhoods such as Little India , Little Portugal etc that celebrates the city's diversity and multi-culturalism . South Asians are approx. 12% of the total population they are scattered across the city of Toronto . The travel and tourism industry Toronto has been grown significantly with massive increase in number of Indians travelling to Toronto for business or for pleasure .

Business Problem :

The objective of this project is to recommend the “best” neighborhood in Toronto where people can explore “good” Indian cuisine or variety of “good” Indian restaurants

Data Source :

We will use the Foursquare location and data and geographical cluster information to achieve this recommendation .

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

Data Extraction & Preparation :

- ❑ Use Web scrapping technique to pull the postal code information for boroughs/neighbourhood in Toronto from Wikipedia page
 - Source - https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M
- ❑ Prepare the data and remove empty column values

	Postalcode	Borough	Neighbourhood
0	M3A	North York	Parkwoods
1	M4A	North York	Victoria Village
2	M5A	Downtown Toronto	Regent Park, Harbourfront
3	M6A	North York	Lawrence Manor, Lawrence Heights
4	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government

- ❑ Extract and manipulate the geospatial data for Toronto
 - Source - http://cocl.us/Geospatial_data

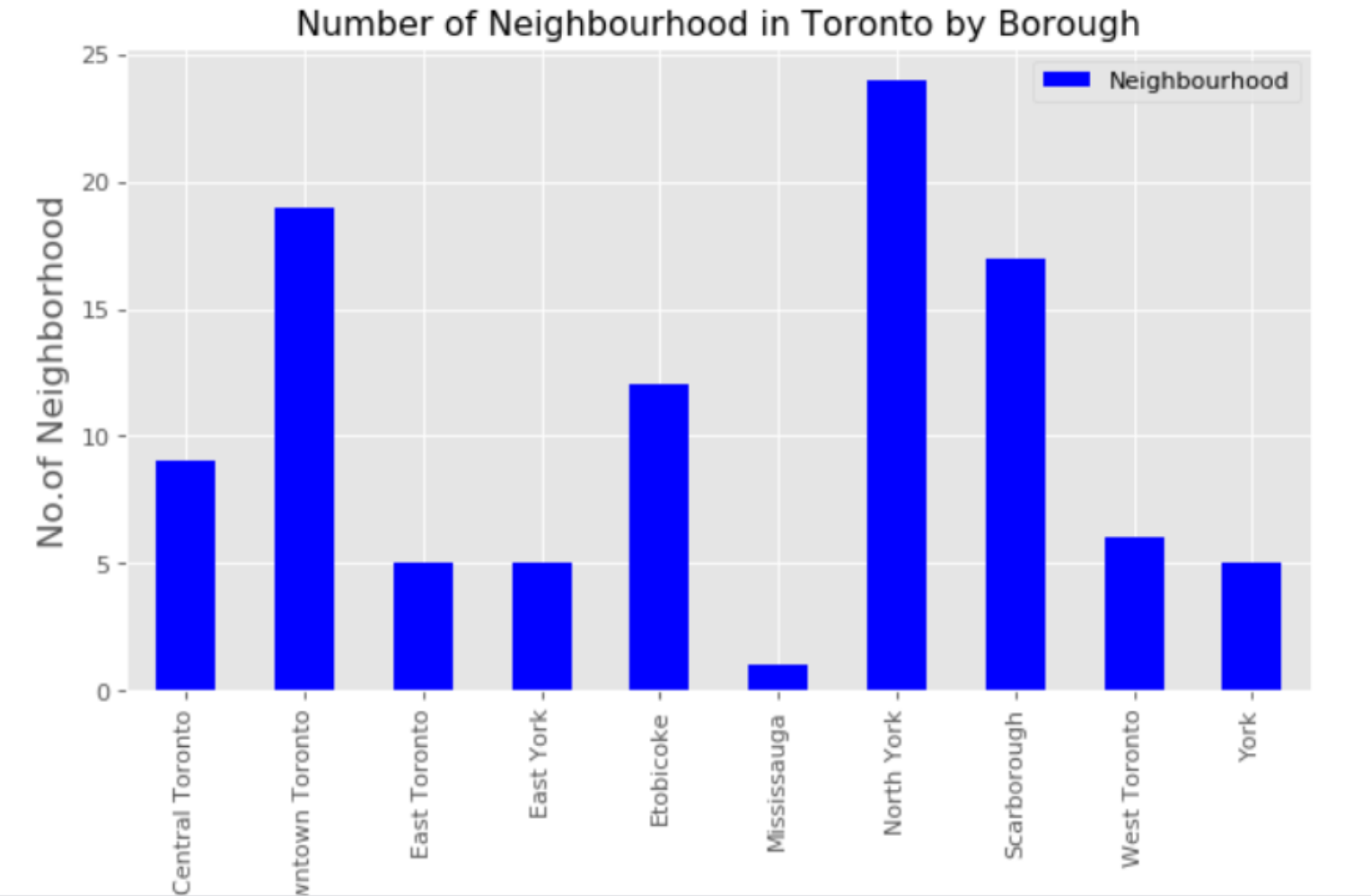
	Postal Code	Latitude	Longitude
0	M1B	43.806686	-79.194353
1	M1C	43.784535	-79.160497
2	M1E	43.763573	-79.188711
3	M1G	43.770992	-79.216917
4	M1H	43.773136	-79.239476

- ❑ Finally merge the 2 data set to create one single data set

	Postalcode	Borough	Neighbourhood	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

Exploratory Analysis :

- ❑ North York is the most densely populated borough with 24 neighborhood
- ❑ There are a total of 103 different neighborhoods in Toronto



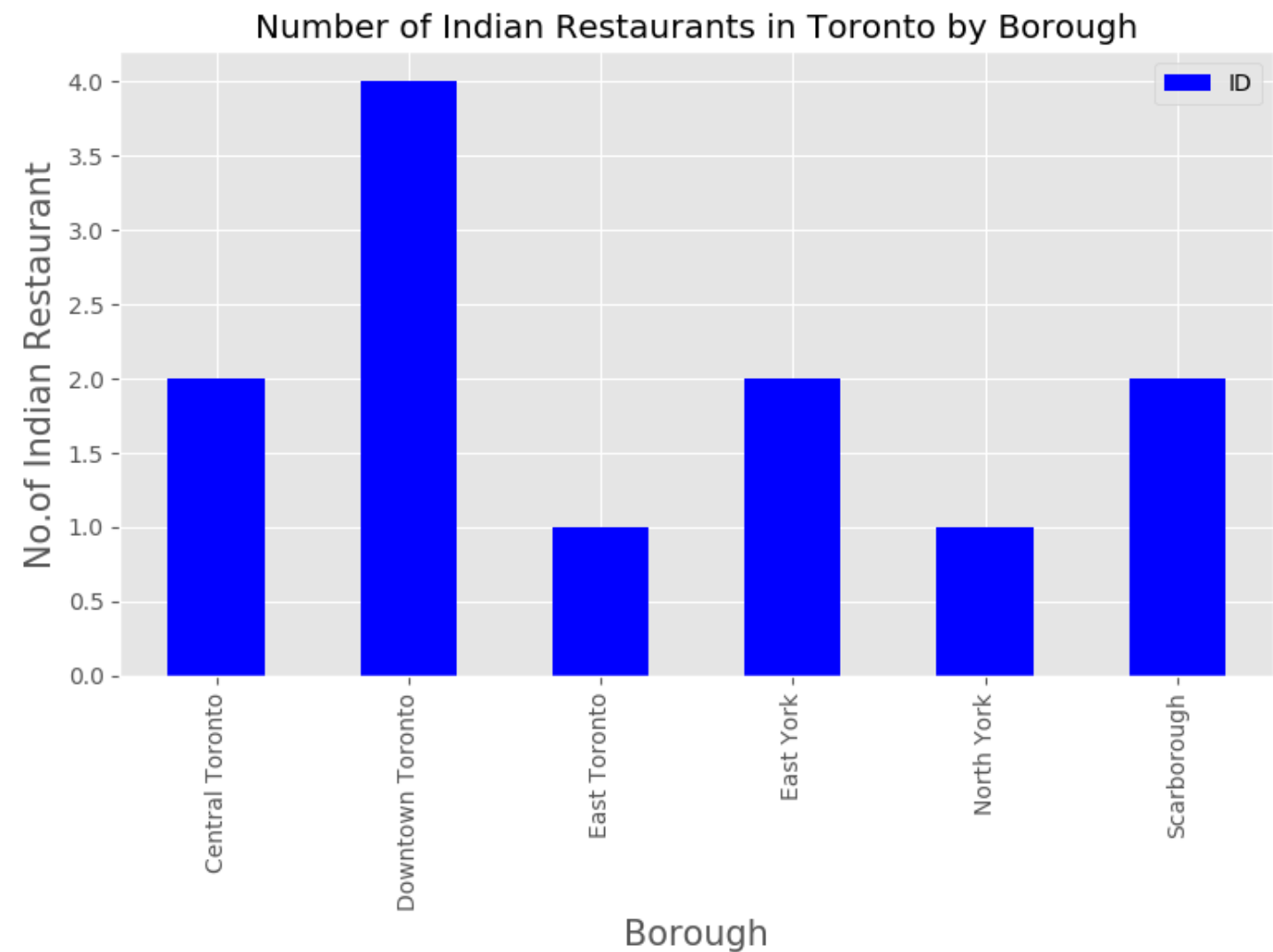
Four Square API :

- ☐ Provide Credentials (CLIENT_ID, CLIENT_SECRET, VERSION)
- ☐ Define function to fetch data from Foursquare API . This function will get top 100 venues within a radius of 1000 miles for a given latitude and longitude
- ☐ We know that there are a total of of 103 different neighborhoods in Toronto
- ☐ **Build a Logic to get the list of neighborhoods that have Indian restaurant**

	Borough	Neighborhood	ID	Name	Venue_Lat	Venue_Lng
0	Scarborough	Woburn	4c632edeedd320a19ad5ae29	Bombay Palace	43.767057	-79.227682
1	Scarborough	Cedarbrae	4d6008f829ef236a8832a059	CANBE Foods Inc	43.773546	-79.246082
2	Scarborough	Cedarbrae	4c77fc87bd346dcb8c90f0ef	La Sani Grill	43.776214	-79.234848
3	Scarborough	Dorset Park, Wexford Heights, Scarborough Town...	5226562611d2cd49d83ef03b	Kairali	43.754915	-79.276945
4	Scarborough	Dorset Park, Wexford Heights, Scarborough Town...	4bf96c435317a593a23a017f	Karaikudi Chettinad South Indian Restaurant	43.756042	-79.276276

Analysis :

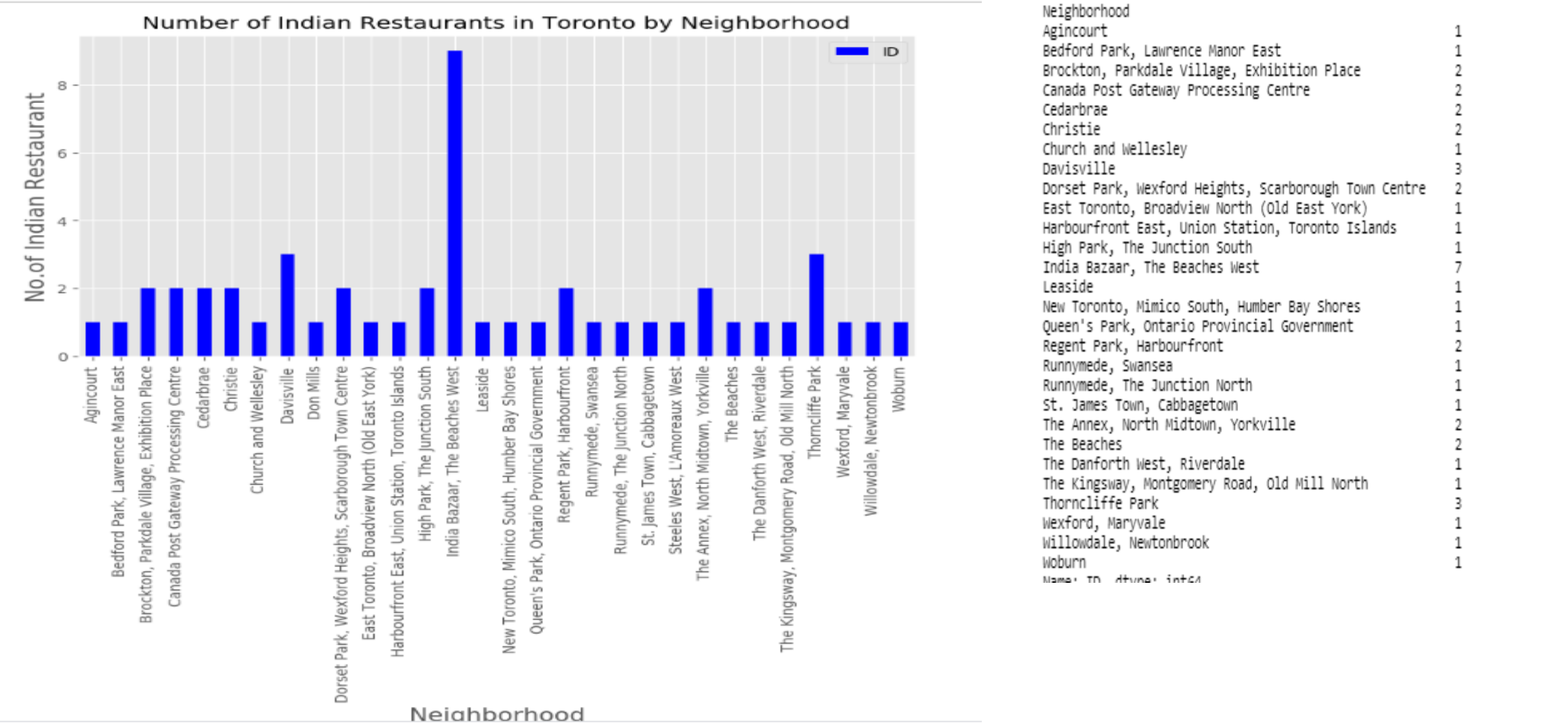
❑ East Toronto has the maximum number of Indian Restaurants



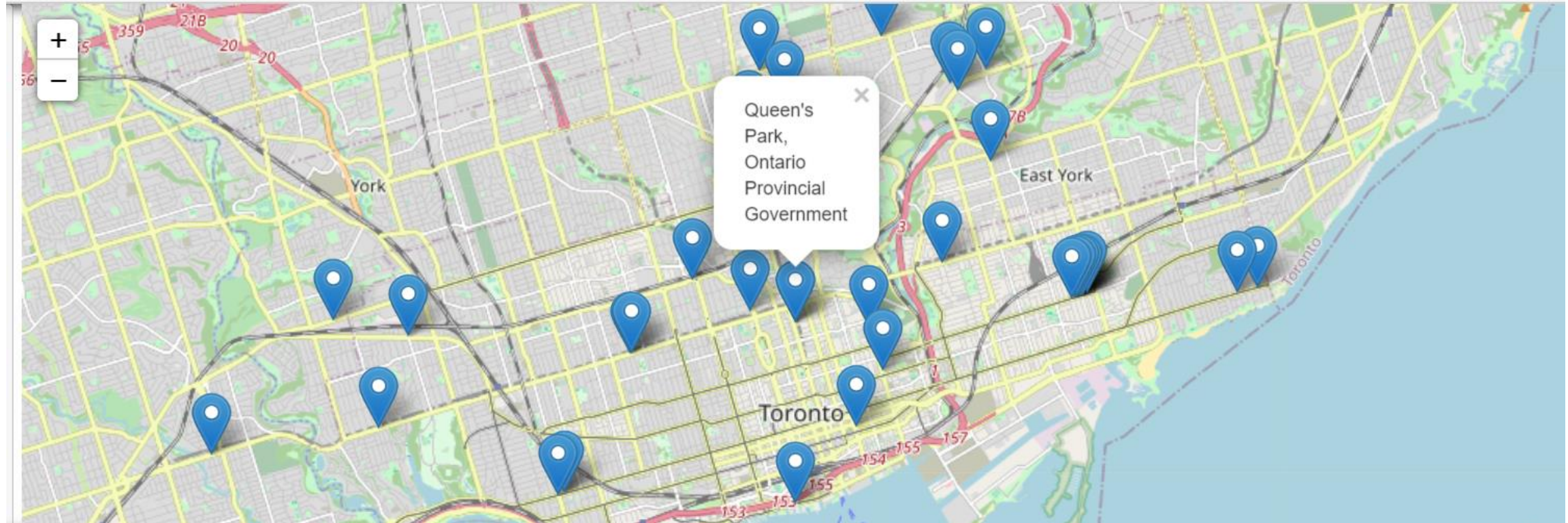
Borough	
Central Toronto	5
Downtown Toronto	8
East Toronto	10
East York	5
Etobicoke	2
Mississauga	2
North York	2
Scarborough	7
West Toronto	4
York	1

Analysis :

India Bazaar , The Beaches West has the maximum number of Indian Restaurants



Visualize & Recommend :



- ✓ North York Neighborhood and India Bazaar , The Beaches West borough have the maximum number of Indian Restaurants and can be recommended as first choice of visit to explore various Indian cuisines