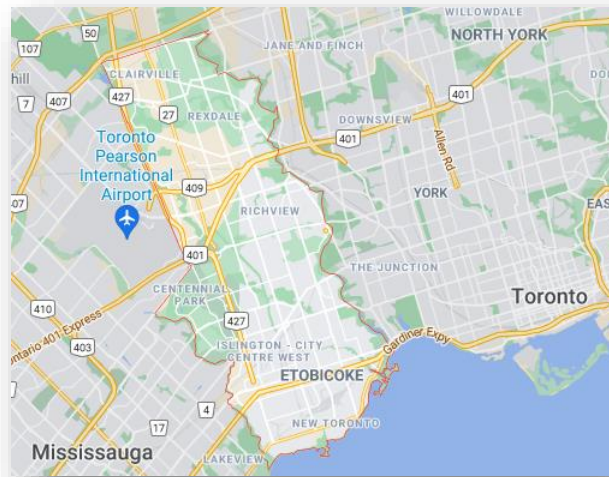


## Applied Data Science Capstone

### Capstone Project – The Battle of Neighborhoods

## What is the right neighborhood to open a new Bank in Etobicoke-Toronto?



### Data Description

In order to make the necessary recommendations to the investor who is interested in opening a new Bank in the city of Etobicoke, two main data sources were used; 1) the demographics of the city of Etobicoke (*Source: [https://en.wikipedia.org/wiki/Demographics\\_of\\_Toronto\\_neighbourhoods](https://en.wikipedia.org/wiki/Demographics_of_Toronto_neighbourhoods)*) and 2) the list of postal codes for the city of Toronto (*Source: [https://en.wikipedia.org/wiki/List\\_of\\_postal\\_codes\\_of\\_Canada:\\_M](https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M)*).

The demographic data of the city of Etobicoke will allow to know the most relevant data of the neighborhoods of the city, such as: population, population density, average income per inhabitant, population growth projection, among others (Table 1). All these characteristics will be taken into account to choose the most attractive neighborhoods to open a new Bank. In addition to the demographic data, the Foursquare.com service (API-REQUEST) will be used to identify how many bank branches around each of the neighborhoods (Figure 2), this information is key to know in which neighborhood there is greater competition with respect to the other neighborhoods.

Table 1. Demographics Etibicoke neighborhoods features.

Neighborhood	Population	Land area (km2)	Density (people/km2)	% Change in Population since 2001	Average Income	Transit Commuting %
Alderwood	11656	4.94	2360	-4.0	35239	8.8
Centennial	12565	4.94	2544	0.5	34867	11.5
Clairville	8506	6.71	1268	-3.3	26610	13.2
Eatonville	19131	11.26	1699	4.3	36206	12.6
Humber Bay Shores	10775	1.42	7588	-5.7	39186	15.7
Humber Heights	4674	1.69	2766	8.3	39738	10.1
Humberwood	7319	17.40	421	8.0	29576	7.9
Humber Valley Village	14453	5.45	2652	-0.1	80618	12.0
Islington – Six Points	16508	4.02	4106	3.7	43570	17.1
Kingsview Village	16254	4.05	4013	-6.2	32004	11.8
Long Branch	9625	2.22	4336	-7.4	37288	14.2
Markland Wood	10240	2.92	3507	1.0	51695	9.2
Mimico	14198	5.40	2629	15.4	47011	11.6
New Toronto	10455	2.71	3858	-5.8	33415	13.0
Princess Gardens	9288	4.13	2249	1.0	80607	7.2

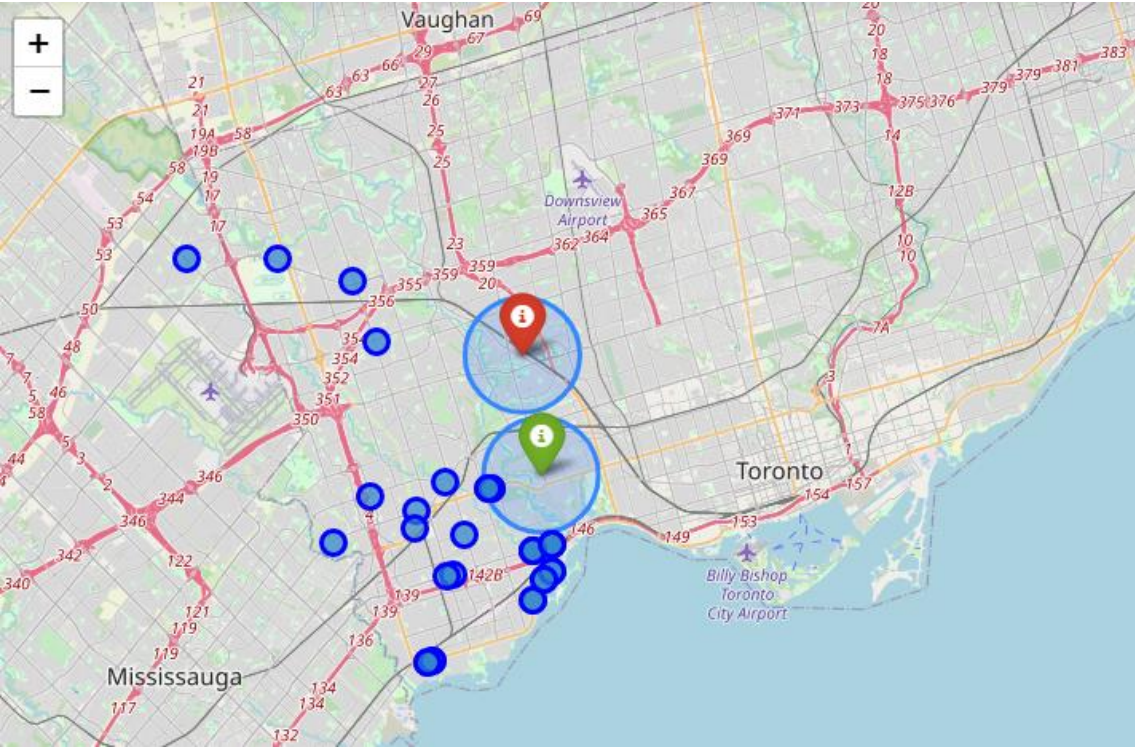


Figure 2. Banks around the Etibicoke neighborhoods (from Foursquare)

The list of zip codes will allow us to locate the neighborhoods around the city of Toronto and compare them with the demographic data to validate that we are analyzing the correct neighborhoods (Table 2).

Table 2. Summary of Etibicoke zip codes.

	PostalCode	Borough	Neighborhood
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	Queen's Park	Ontario Provincial Government
...	...	...	...
98	M8X	Etobicoke	The Kingsway, Montgomery Road, Old Mill North
99	M4Y	Downtown Toronto	Church and Wellesley
100	M7Y	East Toronto Business	Enclave of M4L
101	M8Y	Etobicoke	Old Mill South, King's Mill Park, Sunnylea, Hu...
102	M8Z	Etobicoke	Mimico NW, The Queensway West, South of Bloor,...



Figure 3. Etibicoke Neighborhoods location from data source 1 (demographics)