**Capstone project: Battle of the neighborhoods**

***Recommendation of the neighbourhood in Toronto to open a Spanish restaurant.***

**Introduction**

As a Spanish living in Toronto, I am studying the possibility to open a Spanish restaurant in Toronto where people could enjoy well elaborated food. As I need as many people as possible to come to the restaurant, choosing the right location is crucial to the business.

**Data source**

The project will make use of the following data sources:

Postal codes of different neighbourhoods in Canada will be retrieved from this website <https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M> Location coordinates of different neighborhoods will be retrieved from this site: <https://cocl.us/Geospatial_data>

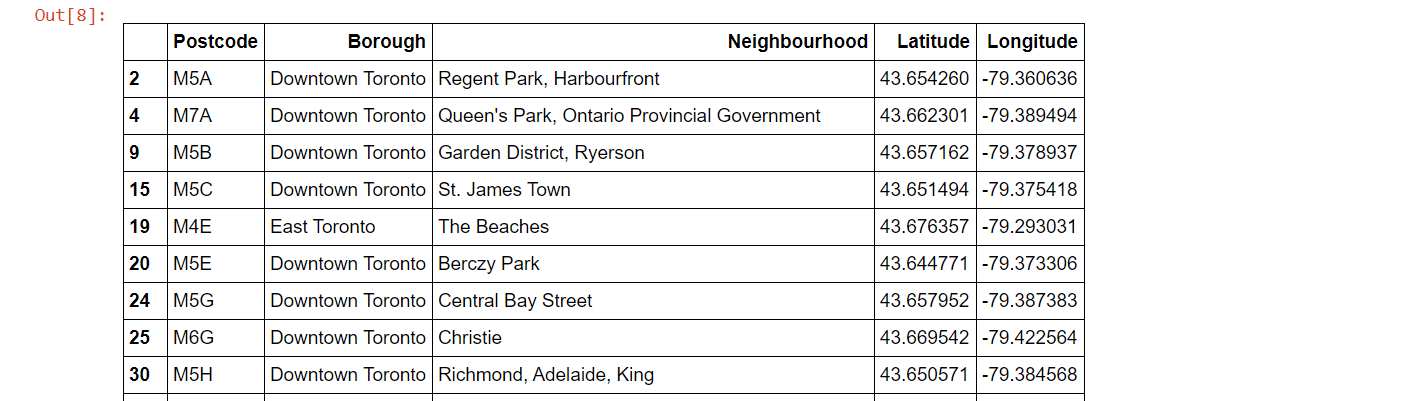
Finally, I will use the FourSquare API to explore different neighborhoods in Toronto. The Foursquare explore function will be used to get the most popular venues in each neighborhood.

**Methodology**[**¶**](https://render.githubusercontent.com/view/ipynb?color_mode=light&commit=da6df4c6960407d9fd1542a29e125d9cc3e83d04&enc_url=68747470733a2f2f7261772e67697468756275736572636f6e74656e742e636f6d2f7061756c616d6172616e6f6e2f436f7572736572615f43617073746f6e652f646136646634633639363034303764396664313534326132396531323564396363336538336430342f43617073746f6e6525323050726f6a6563742532302d253230546865253230426174746c652532306f662532304e65696768626f72686f6f64732532302834292e6970796e62&nwo=paulamaranon%2FCoursera_Capstone&path=Capstone+Project+-+The+Battle+of+Neighborhoods+%284%29.ipynb&repository_id=329852007&repository_type=Repository#Methodology)

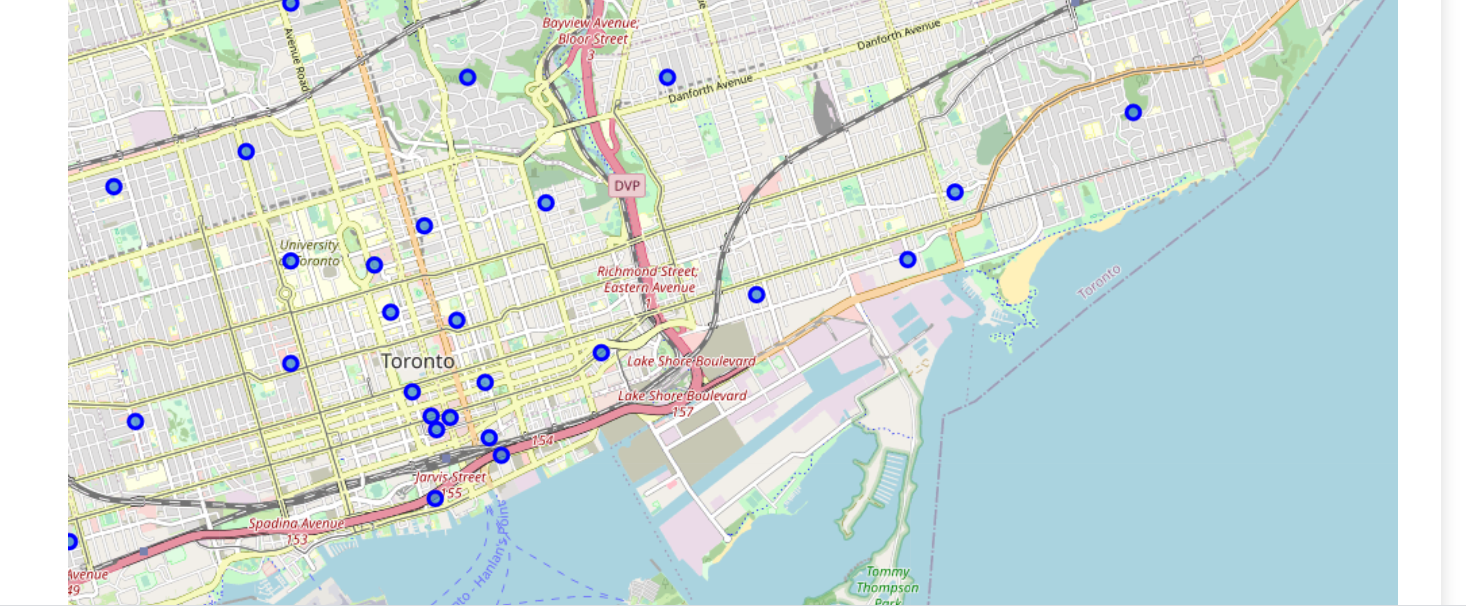
The postal codes of different neighborhoods in Toronto will be collected by Web scraping (HTTP request). Data will be cleaned and selected by Beautiful Soup library. After that, the geographical coordinates, latitude, and longitude will be retrieved by using the Google API. The neighborhood with name, postal code, geographical coordinates will be regrouped and cleaned by Pandas library. Then FourSquare API will be called to retrieve all the venues in different neighborhoods.

**Results**

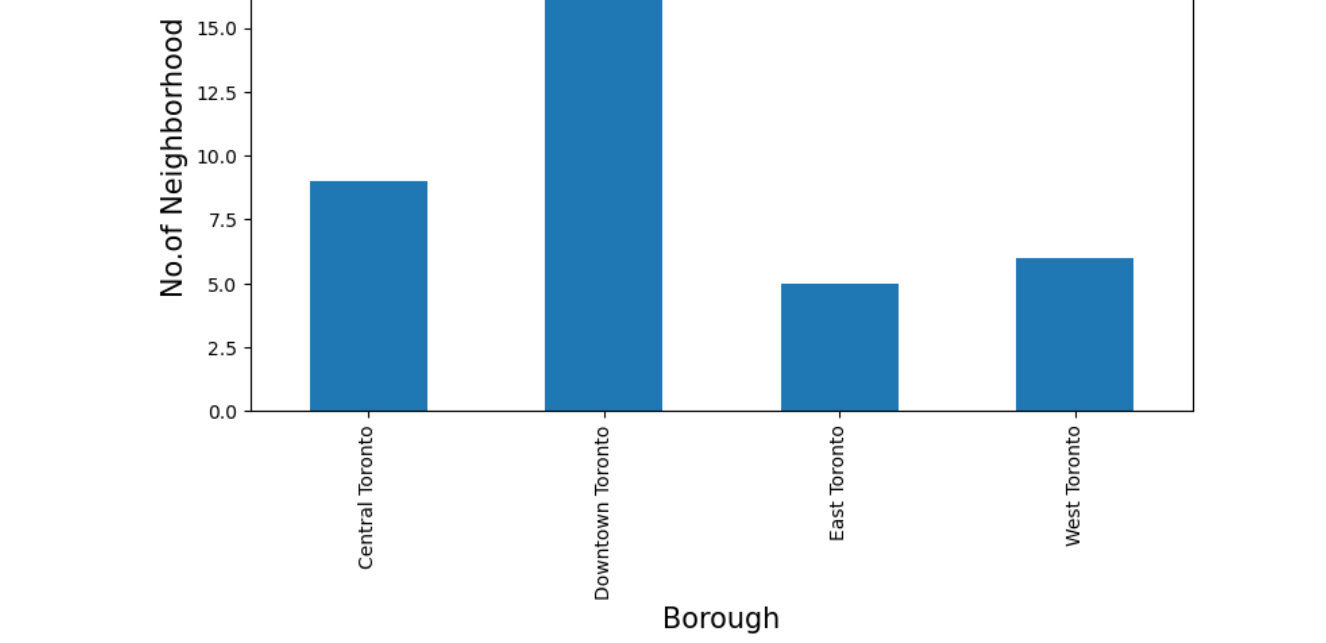
## Post codes, latitudes and longitudes for various neighbourhoods in Canada[¶](https://eu-gb.dataplatform.cloud.ibm.com/data/notebooks/converter/assets/23e552a7-b77a-4df8-94a9-dfece876309d?project=0b724440-95d8-4480-b0fe-1cbecabaaa85#Importing-the-csv-file-conatining-the-latitudes-and-longitudes-for-various-neighbourhoods-in-Canada)

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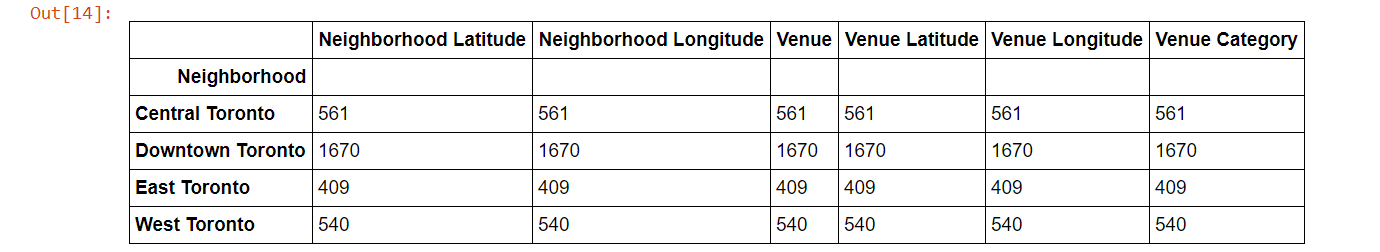
## Visualizing all the Neighbourhoods

****[**¶**](https://render.githubusercontent.com/view/ipynb?color_mode=light&commit=da6df4c6960407d9fd1542a29e125d9cc3e83d04&enc_url=68747470733a2f2f7261772e67697468756275736572636f6e74656e742e636f6d2f7061756c616d6172616e6f6e2f436f7572736572615f43617073746f6e652f646136646634633639363034303764396664313534326132396531323564396363336538336430342f43617073746f6e6525323050726f6a6563742532302d253230546865253230426174746c652532306f662532304e65696768626f72686f6f64732532302834292e6970796e62&nwo=paulamaranon%2FCoursera_Capstone&path=Capstone+Project+-+The+Battle+of+Neighborhoods+%284%29.ipynb&repository_id=329852007&repository_type=Repository#Methodology)

**We see that Downtown Toronto has highest number of neighborhoods**

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## Venues categories



## The top 5 venues for each neighborhood



**Discussion and conclusion**

Based on Four Square API search result, we can see that coffee shops and restaurants venue categories are the most common venues in the different neighbourhoods. Which means that people usually eat out. Among all the venues there is none Spanish restaurant listed and it is known that more than 70,000 people living in Toronto list Spanish as their Mother Tongue.

Among of all neighbourhoods, Downtown Toronto is the city with more boroughs and probably the most populated city, thus, is probably the best neighbourhood to open a restaurant. This result of this analysis has some limitations. It cannot reflect the behaviour of the customer in that area. People like to visit the restaurants or stop by the coffee shops does not mean they want Spanish food. The customers may enjoy the fact of trying new dishes, more than just having the typical Chinese or Canadian food. Rental cost has not been taken into account either. Downtown Toronto may be the most expensive rental area in Toronto.