

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¶

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.

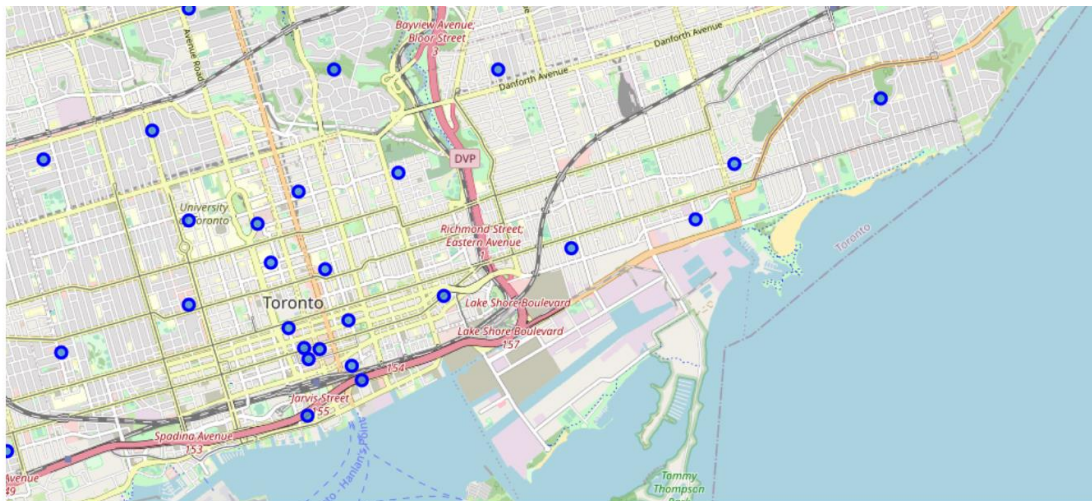
Results

Post codes, latitudes and longitudes for various neighbourhoods in Canada¶

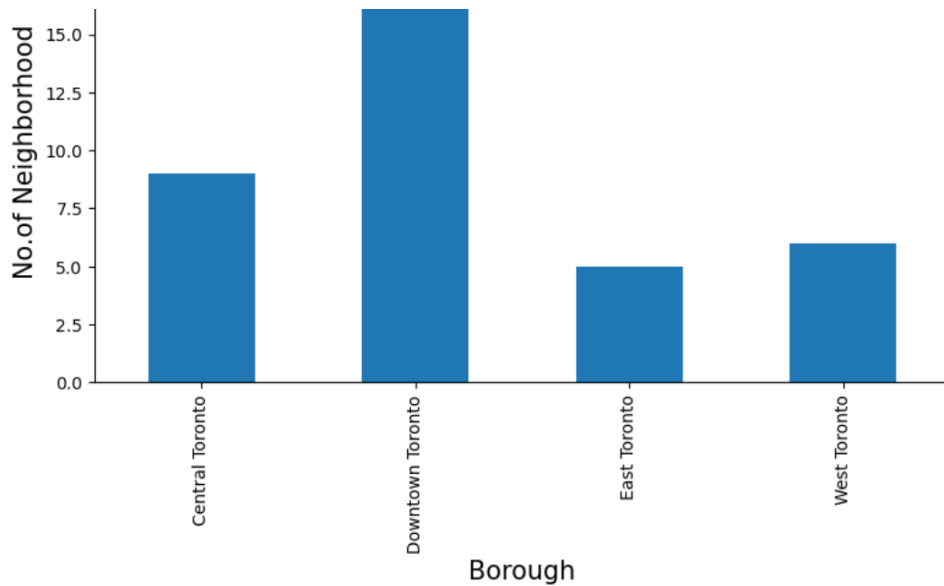
Out[8]:

	Postcode	Borough	Neighbourhood	Latitude	Longitude
2	M5A	Downtown Toronto	Regent Park, Harbourfront	43.654260	-79.360636
4	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.662301	-79.389494
9	M5B	Downtown Toronto	Garden District, Ryerson	43.657162	-79.378937
15	M5C	Downtown Toronto	St. James Town	43.651494	-79.375418
19	M4E	East Toronto	The Beaches	43.676357	-79.293031
20	M5E	Downtown Toronto	Berczy Park	43.644771	-79.373306
24	M5G	Downtown Toronto	Central Bay Street	43.657952	-79.387383
25	M6G	Downtown Toronto	Christie	43.669542	-79.422564
30	M5H	Downtown Toronto	Richmond, Adelaide, King	43.650571	-79.384568

Visualizing all the Neighbourhoods



We see that Downtown Toronto has highest number of neighborhoods



Venues categories

Out[14]:

	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Neighborhood						
Central Toronto	561	561	561	561	561	561
Downtown Toronto	1670	1670	1670	1670	1670	1670
East Toronto	409	409	409	409	409	409
West Toronto	540	540	540	540	540	540

The top 5 venues for each neighborhood

Out[20]:

	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Central Toronto	Coffee Shop	Italian Restaurant	Café	Sushi Restaurant	Restaurant
1	Downtown Toronto	Coffee Shop	Café	Park	Hotel	Restaurant
2	East Toronto	Coffee Shop	Greek Restaurant	Bakery	Pub	Café
3	West Toronto	Café	Coffee Shop	Bar	Restaurant	Bakery

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.