

AFG Restaurant in Toronto

I. Introduction

A) Description of the Business Problem & Discussion of the Background

- Problem: Opening a Peruvian-Nikkei Restaurant in Toronto, Canada.

Toronto, the capital of the province of Ontario in Canada is considered one of the most diverse cities in the world with almost half of its residents being foreign born and half of its population being a visible minority. Since the area of Toronto has the largest Latin American community in Canada, we need to determine if it's a profitable idea to open a Peruvian-Nikkei Restaurant in one of its neighborhoods.

We will analyze several boroughs/neighborhoods in Toronto with significant Latin American population in order to determine the most lucrative area to open a Peruvian-Nikkei restaurant by extracting their demographic data as well as Peruvian restaurants located in these neighborhoods.

B) Target Audience:

- 1) Investors or Restaurateurs who would like to invest or open a Peruvian-Nikkei restaurant in Toronto, Canada.
- 2) Latino population that enjoys Peruvian-Nikkei cuisine.

II. Data Description

A) I considered the data from different sources:

1) I will use Wikipedia in order to gather information about the neighborhoods in Toronto, CA such as their names, postal code and boroughs; therefore, we will use the “List of Postal Code of Canada: M”:

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

2) I will use Geospatial Data to obtain the geographical coordinates of the neighborhoods in Toronto.

3) I will use Wikipedia to obtain Toronto’s Neighborhoods’ Demographics and to find out the highly populated Latino neighborhoods.

https://en.wikipedia.org/wiki/Demographics_of_Toronto

4) I will use Foursquare’s explore API in order to obtain information about the various Peruvians restaurants located in the densely populated Latin American neighborhoods.

B) Methodology – Data Cleaning

I. I scraped the data from the Wikipedia page “List of Postal code of Canada : M” and I cleaned it to obtain a dataframe with information pertaining to the Postcodes, Boroughs and Neighborhoods.

	Postcode	Borough	Neighbourhood
0	M1B	Scarborough	Rouge,Malvern
1	M1C	Scarborough	Highland Creek,Rouge Hill,Port Union
2	M1E	Scarborough	Guildwood,Morningside,West Hill
3	M1G	Scarborough	Woburn
4	M1H	Scarborough	Cedarbrae
5	M1J	Scarborough	Scarborough Village

Young players improve, old players decline

- I added geographical coordinates to the neighborhoods by extracting data from the Geospatial CSV file.

	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

I used the PostCodes to merge both dataframes and created a new dataframe containing the following columns: Postcode, Borough, Neighbourhood, Latitude and Longitude.

	Postcode	Borough	Neighbourhood	Latitude	Longitude
0	M1B	Scarborough	Rouge,Malvern	43.806686	-79.194353
1	M1C	Scarborough	Highland Creek,Rouge Hill,Port Union	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
5	M1J	Scarborough	Scarborough Village	43.744734	-79.239476
6	M1K	Scarborough	East Birchmount Park,Ionview,Kennedy Park	43.727929	-79.262029
7	M1L	Scarborough	Clairlea,Golden Mile,Oakridge	43.711112	-79.284577
8	M1M	Scarborough	Cliffcrest,Cliffside,Scarborough Village West	43.716316	-79.239476
9	M1N	Scarborough	Birch Cliff,Cliffside West	43.692657	-79.264848
10	M1P	Scarborough	Dorset Park,Scarborough Town Centre,Wexford He...	43.757410	-79.273304

I. I scraped the Demographics of Toronto's Neighborhoods' Wikipedia Page in order to find out the neighborhoods with a high Latino population. There were only 4 neighborhoods: Davenport, York Centre, Humber River-Black Creek and York South-Weston.

	Riding	Population	Ethnic Group #1	%	Ethnic Group #2	%.1	Ethnic Group #3	%.2	Ethnic Group #4	%.3
0	Spadina-Fort York	114315	White	56.3	Chinese	14.8	South Asian	8.3	Black	5.1
1	Beaches-East York	108435	White	64.5	South Asian	10.9	Black	6.6	Chinese	5.7
2	Davenport	107395	White	66.9	Black	6.4	Chinese	5.9	Latin American	5.4
3	Parkdale-High Park	106445	White	72.4	Black	5.3	NaN	NaN	NaN	NaN
4	Toronto-Danforth	105395	White	65.5	Chinese	12.3	South Asian	5.4	Black	5.0
5	Toronto-St. Paul's	104940	White	70.8	Black	5.1	NaN	NaN	NaN	NaN
6	University-Rosedale	100520	White	66.5	Chinese	14.0	NaN	NaN	NaN	NaN
7	Toronto Centre	99590	White	48.8	South Asian	11.8	Chinese	11.1	Black	9.1

	Riding	Population	Ethnic Group #1	%	Ethnic Group #2	%.1	Ethnic Group #3	%.2	Ethnic Group #4	%.3	Ethnic Group #5	%.4	Ethnic Group #6	%.5
0	Willowdale	117405	White	33.1	Chinese	25.3	West Asian	10.9	Korean	10.3	South Asian	5.9	Filipino	5.4
1	Eglinton-Lawrence	112925	White	67.7	Filipino	10.7	Black	5.5	NaN	NaN	NaN	NaN	NaN	NaN
2	Don Valley North	109060	Chinese	31.3	White	29.4	South Asian	10.2	West Asian	7.6	NaN	NaN	NaN	NaN
3	Humber River-Black Creek	107725	White	25.4	Black	22.8	Latin American	9.5	Southeast Asian	8.9	Filipino	5.5	NaN	NaN
4	York Centre	103760	White	53.1	Filipino	16.5	Black	7.9	Latin American	5.1	NaN	NaN	NaN	NaN
5	Don Valley West	101790	White	57.9	South Asian	13.3	Chinese	10.6	NaN	NaN	NaN	NaN	NaN	NaN
6	Don Valley East	93170	White	40.9	South Asian	17.1	Black	9.3	Chinese	7.5	Filipino	7.4	West Asian	5.5

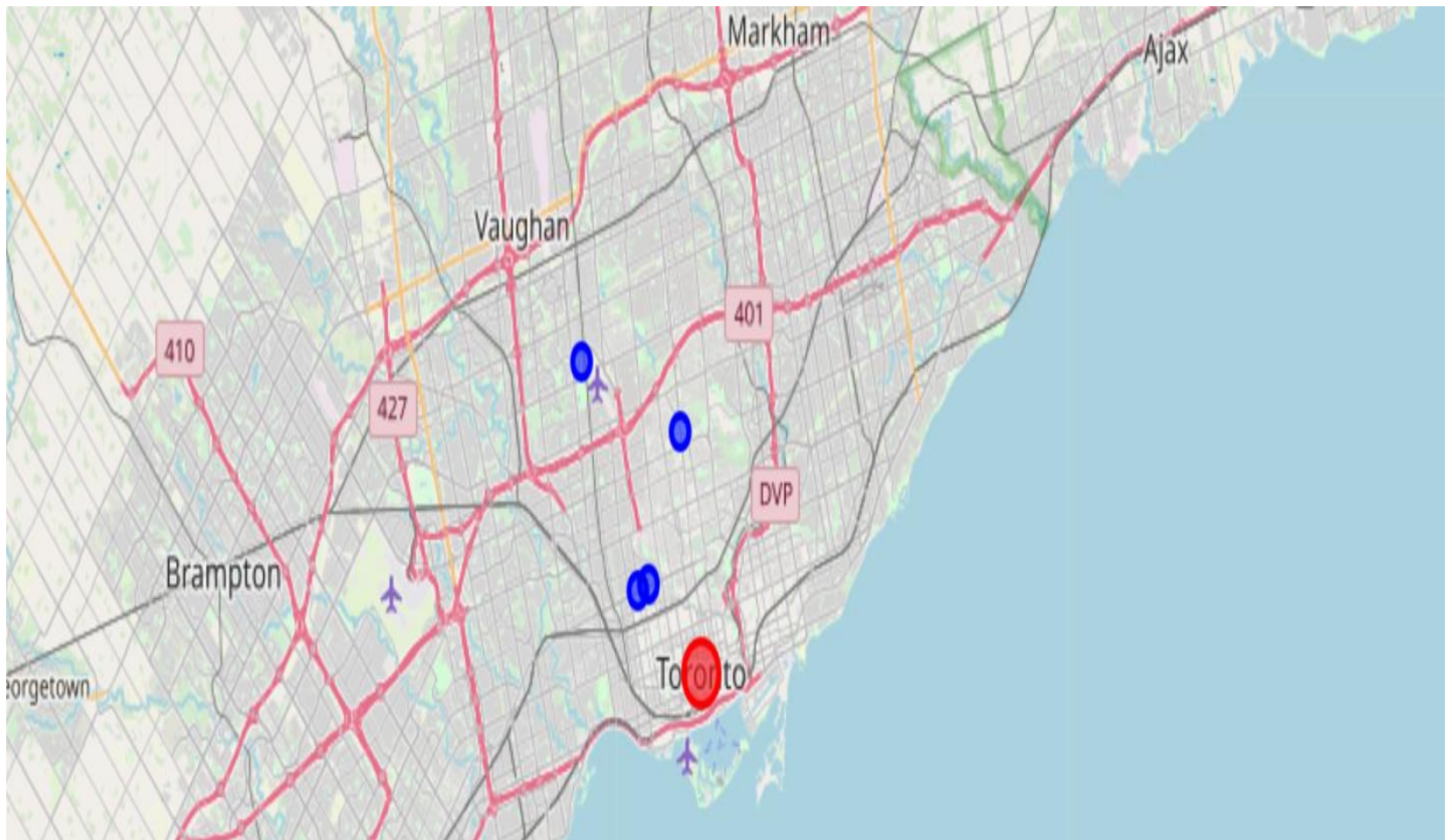
	Riding	Population	Ethnic Group #1	%	Ethnic Group #2	%1	Ethnic Group #3	%2	Ethnic Group #4	%3	Ethnic Group #5	%4
0	Etobicoke-Lakeshore	127520	White	71.3	South Asian	5.5	Black	5.0	NaN	NaN	NaN	NaN
1	Etobicoke North	116960	South Asian	28.9	White	23.8	Black	23.4	NaN	NaN	NaN	NaN
2	Etobicoke Centre	116055	White	72.3	South Asian	5.9	Black	5.9	NaN	NaN	NaN	NaN
3	York South-Weston	115130	White	44.2	Black	23.2	Latin American	8.5	Filipino	5.9	South Asian	5.7

- I utilized Foursquare's API to find out how many Peruvian Restaurants were located in the Toronto Neighborhoods,
- and I was only able to find 4 Peruvian Restaurants in the Toronto area.

	name	categories	address	cc	city	country	formattedAddress	labeledLatLngs	lat	lng	postalCode	state	
0	Pisco Peruvian Cuisine	Peruvian Restaurant	3249 Yonge St	CA	Toronto	Canada	[3249 Yonge St, Toronto ON, Canada]	['label': 'display', 'lat': 43.72896548616577...	43.728965	-79.403125	NaN	ON	518fd
1	Paracas	Peruvian Restaurant	992 St Clair Ave W	CA	Toronto	Canada	[992 St Clair Ave W, Toronto ON, Canada]	['label': 'display', 'lat': 43.67939, 'lng': ...	43.679390	-79.436953	NaN	ON	5443f
2	Kay Pacha	Peruvian Restaurant	744 St Clair Ave W	CA	Toronto	Canada	[744 St Clair Ave W, Toronto ON M6C 1B5, Canada]	['label': 'display', 'lat': 43.68141, 'lng': ...	43.681410	-79.427892	M6C 1B5	ON	5a1a2
3	Carmen y Pepe Peruvian Cuisine	Peruvian Restaurant	40 Carl Hall Rd	CA	North York	Canada	[40 Carl Hall Rd, North York ON M3K 2C1, Canada]	['label': 'display', 'lat': 43.751127, 'lng': ...	43.751127	-79.480103	M3K 2C1	ON	5dbf3

III. Data Analysis

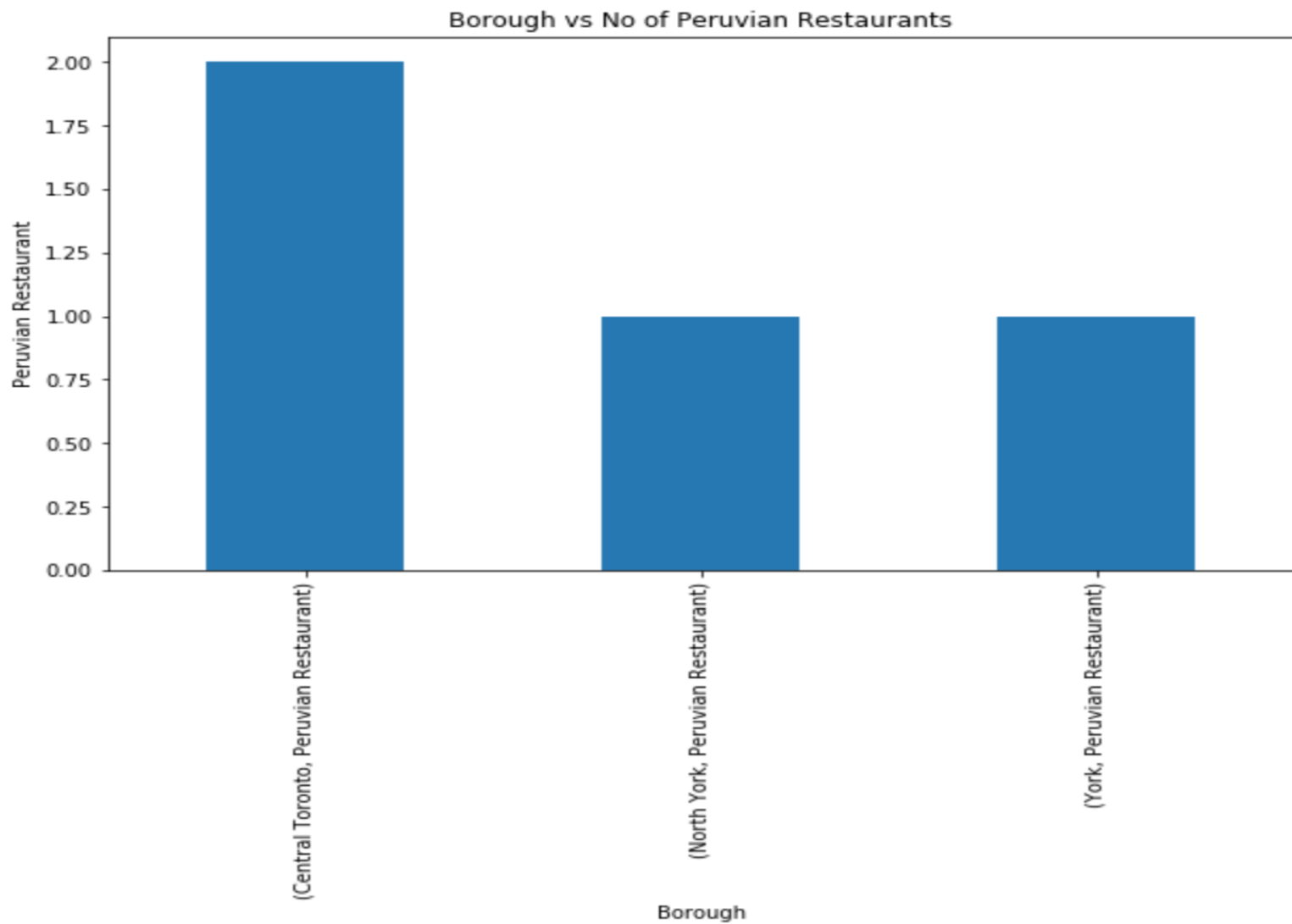
- I used folium library to visualize the Peruvian restaurants' locations in each borough of Toronto.



A. Then, I try to find out the relationship between Latin American neighborhoods and Peruvian Restaurants.

	Postcode	Neighbourhood	Restaurant Name	Restaurant	Address	City	Country	state
Borough								
North York	M3K	CFB Toronto,Downsview East	Carmen y Pepe Peruvian Cuisine	Peruvian Restaurant	40 Carl Hall Rd	North York	Canada	ON
Central Toronto	M4N	Lawrence Park	Pisco Peruvian Cuisine	Peruvian Restaurant	3249 Yonge St	Toronto	Canada	ON
Central Toronto	M4N	Lawrence Park	Paracas	Peruvian Restaurant	992 St Clair Ave W	Toronto	Canada	ON
York	M6C	Humewood-Cedarvale	Kay Pacha	Peruvian Restaurant	744 St Clair Ave W	Toronto	Canada	ON

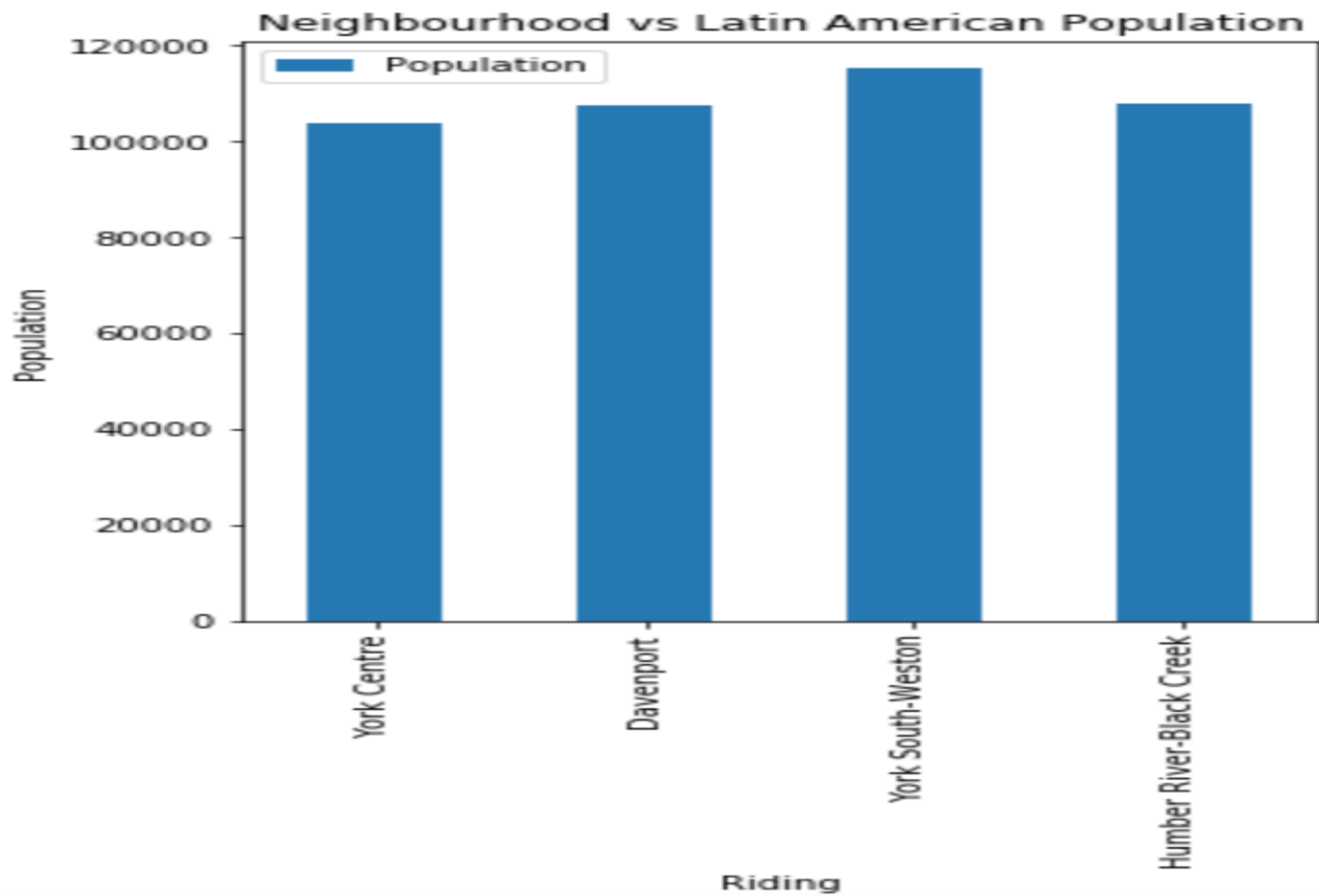
I try to visualize the relationship by using bar charts:



Analyze the relationship between neighborhoods and Latino Population. I extracted the neighborhoods with the highest number of Latin American

population and created a new dataframe

	Riding	Population	Ethnicity	Percentage
0	Davenport	107395	Latin American	5.4
1	Humber River-Black Creek	107725	Latin American	9.5
2	York Centre	103760	Latin American	5.1
3	York South-Weston	115130	Latin American	8.5



Since there were only a few Peruvian Restaurants in the Latino Neighborhoods, I decided to use Foursquare to see the types of Restaurants around the Toronto