

HARLEM TO TORONTO WHERE TO GO?

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BUSINESS PROBLEM

Manhattan is the smallest and most densely populated borough of New York City. With 72,033 people per square mile in 2015, this borough has density higher than any individual American city (1).

Both Manhattan and Old Toronto are boroughs of main cities in US and Canada. It's very difficult to compare these two neighbours due to its difference in demographics but also due to the way these boroughs have split their neighbourhoods.

Can you help me find Harlem like neighbourhoods in Toronto?

DATA ACQUISITION AND CLEANING

- Toronto boroughs and neighbourhoods
https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M, merged with geolocation data from https://cocl.us/Geospatial_data
- Harlem's geolocation: latitude 40.8115504; longitude -73.9464769
- 100 venues in a radius of 750 meters from Foursquare using geolocation data
- Converting list of 2766 venue details (name, location and category) into top 10 most common venues per neighborhood

K-MEANS CLUSTERING

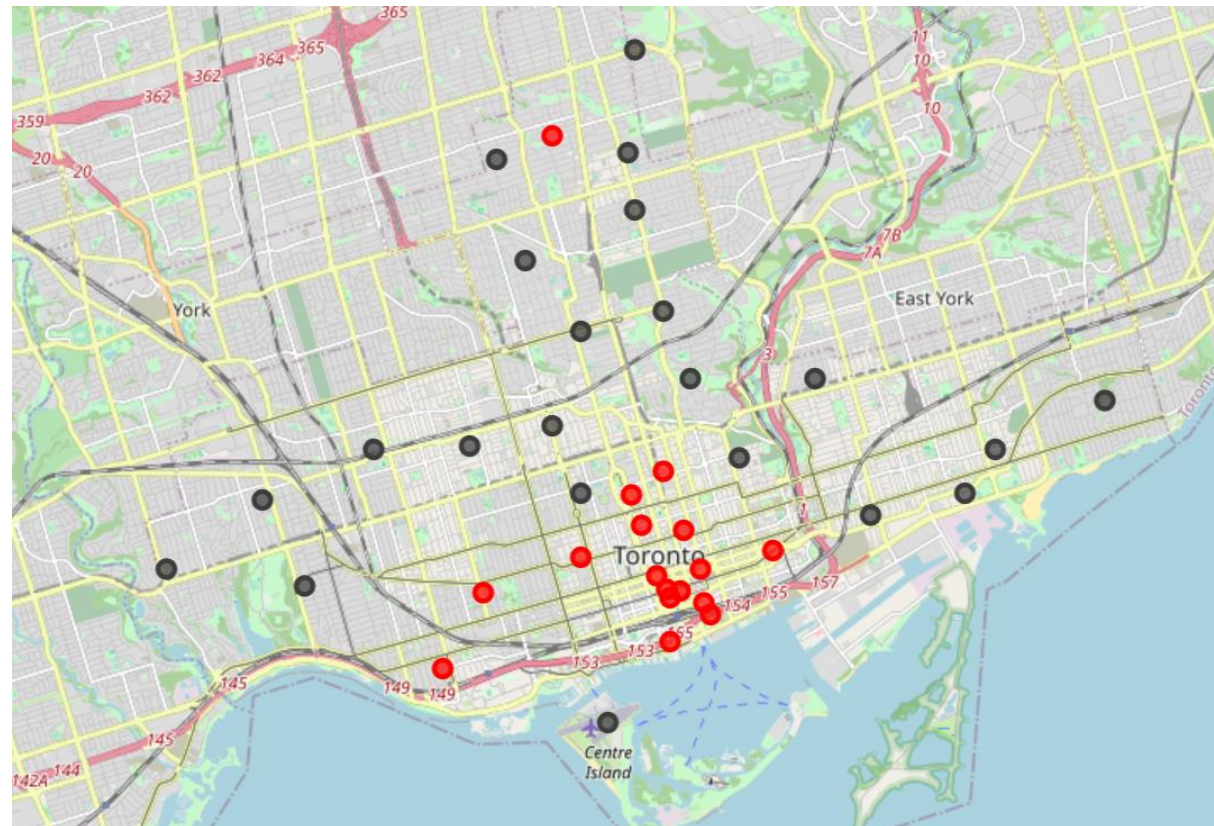
The analysis shows that the borough of Downtown Toronto is by far the borough with more neighbourhoods classified and clustered as like Harlem. There some neighbourhoods in West Toronto and Central Toronto that share the same profile.

	Borough	Neighbourhood	Latitude	Longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
5	Central Toronto	North Toronto West	43.7154	-79.4057	0	Coffee Shop	Sporting Goods Shop	Café	Clothing Store	Grocery Store	Skating Rink	Italian Restaurant	Restaurant	Diner	Dessert Shop
9	Downtown Toronto	Berczy Park	43.6448	-79.3733	0	Coffee Shop	Hotel	Café	Japanese Restaurant	Cocktail Bar	Beer Bar	Restaurant	Bakery	Gastropub	Seafood Restaurant
11	Downtown Toronto	Central Bay Street	43.658	-79.3874	0	Coffee Shop	Café	Clothing Store	Japanese Restaurant	Art Gallery	Italian Restaurant	Ramen Restaurant	Arts & Crafts Store	Diner	Creperie
13	Downtown Toronto	Church and Wellesley	43.6659	-79.3832	0	Coffee Shop	Sushi Restaurant	Japanese Restaurant	Sandwich Place	Restaurant	Men's Store	Diner	Pizza Place	Bookstore	Smoke Shop
14	Downtown Toronto	Commerce Court / Victoria Hotel	43.6482	-79.3798	0	Coffee Shop	Café	Hotel	American Restaurant	Japanese Restaurant	Seafood Restaurant	Restaurant	Concert Hall	Gym	Vegetarian / Vegan Restaurant
15	Downtown Toronto	First Canadian Place / Underground city	43.6484	-79.3823	0	Hotel	Coffee Shop	Café	Japanese Restaurant	Theater	Restaurant	Concert Hall	Seafood Restaurant	Deli / Bodega	Bookstore
16	Downtown Toronto	Garden District / Ryerson	43.6572	-79.3789	0	Coffee Shop	Hotel	Gastropub	Falafel Restaurant	Café	Ramen Restaurant	Japanese Restaurant	Sushi Restaurant	Burger Joint	Park
17	Downtown Toronto	Harbourfront East / Union Station / Toronto Is...	43.6408	-79.3818	0	Coffee Shop	Hotel	Boat or Ferry	Brewery	Park	Japanese Restaurant	Bar	Pizza Place	Café	Plaza
18	Downtown Toronto	Kensington Market / Chinatown / Grange Park	43.6532	-79.4	0	Café	Bar	Coffee Shop	Vegetarian / Vegan Restaurant	Mexican Restaurant	Bakery	Dessert Shop	Art Gallery	Ice Cream Shop	Record Shop
19	Downtown Toronto	Queen's Park / Ontario Provincial Government	43.6623	-79.3895	0	Coffee Shop	Italian Restaurant	Café	Sandwich Place	Sushi Restaurant	Park	Japanese Restaurant	Gastropub	Diner	Ice Cream Shop
20	Downtown Toronto	Regent Park / Harbourfront	43.6543	-79.3606	0	Coffee Shop	Italian Restaurant	Park	Theater	Pub	Bakery	Café	Restaurant	Breakfast Spot	Thai Restaurant
21	Downtown Toronto	Richmond / Adelaide / King	43.6506	-79.3846	0	Café	Hotel	Coffee Shop	Theater	Clothing Store	Restaurant	Tea Room	Plaza	Japanese Restaurant	Cosmetics Shop
23	Downtown Toronto	St. James Town	43.6515	-79.3754	0	Coffee Shop	Café	Seafood Restaurant	Gastropub	American Restaurant	Italian Restaurant	Bakery	Theater	Hotel	Restaurant
25	Downtown Toronto	Stn A PO Boxes	43.6464	-79.3748	0	Coffee Shop	Café	Japanese Restaurant	Hotel	Restaurant	Gym	Cocktail Bar	Beer Bar	Bakery	Italian Restaurant
26	Downtown Toronto	Toronto Dominion Centre / Design Exchange	43.6472	-79.3816	0	Hotel	Coffee Shop	Café	American Restaurant	Concert Hall	Japanese Restaurant	Seafood Restaurant	Gym	Restaurant	Park
33	West Toronto	Brockton / Parkdale Village / Exhibition Place	43.6368	-79.4282	0	Café	Coffee Shop	Restaurant	Gift Shop	Bar	Bakery	Furniture / Home Store	Thrift / Vintage Store	Supermarket	Music Venue
36	West Toronto	Little Portugal / Trinity	43.6479	-79.4197	0	Restaurant	Café	Bar	Vegetarian / Vegan Restaurant	Cocktail Bar	Italian Restaurant	Coffee Shop	Asian Restaurant	Wine Bar	Nightclub
39	Manhattan	Harlem	40.8115504	-73.9464769	0	French Restaurant	Cosmetics Shop	Southern / Soul Food Restaurant	Jazz Club	Cocktail Bar	Burger Joint	Café	American Restaurant	Theater	Pizza Place

K-MEANS CLUSTERING

You can see the most common top 10 venue categories in each neighbourhood that are part of Harlem's cluster as well as a map with the location of each borough (in red).

I can also observe that Harlem's top 4 common venue categories are not in any of the suggested boroughs. You can only see a match from the 5th venue category, "Cocktail Bar", matching the boroughs of Little Portugal, Trinity and Berczy Park.



CONCLUSION

This project was created to help me identify neighbourhoods in Old Town Toronto that are similar to Harlem (Manhattan) due to a recent change in career that is forcing me to leave the place I love. To help me find the best places in Toronto, that I will enjoy as I do in Harlem, I have used data from Foursquare to list the most common venues around 750 meters of each neighbourhood in Toronto, to find those which match with Harlem's most common venues.

Downtown Toronto is the place to start for, as it has the most neighbourhoods in the same cluster as Harlem.