Neighborhood Comparison between New York and Toronto

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1. Introduction

1.1. Background

Today Tourism is one of the pillars of the economy and the people most often visits those countries who are rich in heritage and developed enough from a foreign prospective, like friendly environment. Every city is unique in their own way and give something new. And now the information is so common regarding location of every place around the world on your fingertips which make it easier to explore. Therefore, tourists always eager to travel to different places on the basis of available information, and the comparison (the part of the information) between the two cities always assist to choose the specific places or according to their choice.

1.2. Problem

Toronto and New York both are financial and tourist capitals of their respective countries.
They are diverse in many ways. The goal of our study to find how much these cities are similar and dissimilar from tourist point of view regarding food, accommodation, beautiful places and many more.

2. Data acquisition and cleaning

2.1. Data Sources

The data has been collected from two sources. These are as below.
New York City Borough collected from URL https://cocl.us/new_york_dataset.
The Toronto City Borough collected from https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

2.2 Data Cleaning

The collected data for New York City Borough was in json format, these data then converted into Pandas data Frame. The Toronto City Borough was scared from the Wikipedia and then these data converted into pandas data frame easy analysis.
The Google Geolocation API has been used to extract the Latitudes and Longitudes of the Neighborhoods.
I processed only those cell which have borough assigned to them. Below are the snapshot of the final data frame after cleaning.
Toronto Data:

:

	PostalCode	Borough	Neighborhood	Latitude	Longitude
0	M3A	North York	Parkwoods	43.753259	-79.329656
1	M4A	North York	Victoria Village	43.725882	-79.315572
2	M5A	Downtown Toronto	Regent Park, Harbourfront	43.654260	-79.360636
3	M6A	North York	Lawrence Manor, Lawrence Heights	43.718518	-79.464763
4	M7A	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.662301	-79.389494
...	...	...	...	...	...

Table 1: Quick Overview of Toronto Neighborhood

New York City:

	Borough	Neighborhood	Latitude	Longitude
0	Bronx	Wakefield	40.894705	-73.847201
1	Bronx	Co-op City	40.874294	-73.829939
2	Bronx	Eastchester	40.887556	-73.827806
3	Bronx	Fieldston	40.895437	-73.905643
4	Bronx	Riverdale	40.890834	-73.912585
...	...	...	...	...

Table 2: Quick Overview of New York City Neighborhood

3. Exploratory Data Analysis

Venue details for Downtown Toronto:
The venue details like Venue Category, Venue Latitudes and Venue Longitudes extracted for each neighborhood.
The Venue category coffee shop have highest frequency (26%) in the "Queen's Park, Ontario Provincial Government".

Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Berczy Park	58	58	58	58	58	58
CN Tower, King and Spadina, Railway Lands, Harbourfront West, Bathurst Quay, South Niagara, Island airport	17	17	17	17	17	17
Central Bay Street	64	64	64	64	64	64
Christie	17	17	17	17	17	17
Church and Wellesley	76	76	76	76	76	76
Commerce Court, Victoria Hotel	100	100	100	100	100	100
First Canadian Place, Underground city	100	100	100	100	100	100
Garden District, Ryerson	100	100	100	100	100	100
Harbourfront East, Union Station, Toronto Islands	100	100	100	100	100	100
Kensington Market, Chinatown, Grange Park	63	63	63	63	63	63
Queen's Park, Ontario Provincial Government	34	34	34	34	34	34
Regent Park, Harbourfront	45	45	45	45	45	45
Richmond, Adelaide, King	100	100	100	100	100	100
Rosedale	4	4	4	4	4	4
St. James Town	86	86	86	86	86	86
St. James Town, Cabbagetown	45	45	45	45	45	45
Stn A PO Boxes	97	97	97	97	97	97
Toronto Dominion Centre, Design Exchange	100	100	100	100	100	100
University of Toronto, Harbord	35	35	35	35	35	35

Figure 1. Neighborhood and Venue Category for Toronto

Venue Details for New York City:

The Venue Category Korean Restaurant have highest frequency (13%) in "Midtown South".

Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Battery Park City	70	70	70	70	70	70
Carnegie Hill	93	93	93	93	93	93
Central Harlem	43	43	43	43	43	43
Chelsea	100	100	100	100	100	100
Chinatown	100	100	100	100	100	100
Civic Center	100	100	100	100	100	100
Clinton	100	100	100	100	100	100
East Harlem	41	41	41	41	41	41
East Village	100	100	100	100	100	100
Financial District	100	100	100	100	100	100
Flatiron	100	100	100	100	100	100
Gramercy	87	87	87	87	87	87
Greenwich Village	100	100	100	100	100	100
Hamilton Heights	58	58	58	58	58	58
Hudson Yards	63	63	63	63	63	63
Inwood	58	58	58	58	58	58
Lenox Hill	100	100	100	100	100	100
Lincoln Square	98	98	98	98	98	98
Little Italy	100	100	100	100	100	100
Lower East Side	54	54	54	54	54	54
Manhattan Valley	47	47	47	47	47	47
Manhattanville	45	45	45	45	45	45
Marble Hill	24	24	24	24	24	24
Midtown	100	100	100	100	100	100
Midtown South	100	100	100	100	100	100
Morningside Heights	40	40	40	40	40	40
Murray Hill	100	100	100	100	100	100
Noho	100	100	100	100	100	100

Figure 2 Neighborhood and Venue Category for New York City

Top 10 Venue in Toronto:

Below are the top venue in Toronto according to neighborhoods.

	Neighborhood	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
0	Berczy Park	Venue Category_Coffee Shop	Venue Category_Bakery	Venue Category_Café	Venue Category_Farmers Market	Venue Category_Beer Bar	Venue Category_Restaurant	Venue Category_Seafood Restaurant
1	CN Tower, King and Spadina, Railway Lands, Har…	Venue Category_Airport Service	Venue Category_Airport Lounge	Venue Category_Airport Terminal	Venue Category_Harbor / Marina	Venue Category_Bar	Venue Category_Plane	Venue Category_Rental Car Location
2	Central Bay Street	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Italian Restaurant	Venue Category_Sandwich Place	Venue Category_Department Store	Venue Category_Burger Joint	Venue Category_Bubble Tea Shop
3	Christie	Venue Category_Grocery Store	Venue Category_Café	Venue Category_Park	Venue Category_Baby Store	Venue Category_Italian Restaurant	Venue Category_Coffee Shop	Venue Category_Diner
4	Church and Wellesley	Venue Category_Coffee Shop	Venue Category_Japanese Restaurant	Venue Category_Sushi Restaurant	Venue Category_Restaurant	Venue Category_Gay Bar	Venue Category_Café	Venue Category_Pub
5	Commerce Court, Victoria Hotel	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Restaurant	Venue Category_Hotel	Venue Category_American Restaurant	Venue Category_Gym	Venue Category_Italian Restaurant
6	First Canadian Place, Underground city	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Hotel	Venue Category_Restaurant	Venue Category_Gym	Venue Category_Japanese Restaurant	Venue Category_American Restaurant
7	Garden District, Ryerson	Venue Category_Clothing Store	Venue Category_Coffee Shop	Venue Category_Cosmetics Shop	Venue Category_Italian Restaurant	Venue Category_Café	Venue Category_Japanese Restaurant	Venue Category_Bubble Tea Shop
8	Harbourfront East, Union Station, Toronto Islands	Venue Category_Coffee Shop	Venue Category_Aquarium	Venue Category_Café	Venue Category_Hotel	Venue Category_Brewery	Venue Category_Scenic Lookout	Venue Category_Restaurant
9	Kensington Market, Chinatown, Grange Park	Venue Category_Café	Venue Category_Coffee Shop	Venue Category_Vegetarian / Vegan Restaurant	Venue Category_Bar	Venue Category_Vietnamese Restaurant	Venue Category_Mexican Restaurant	Venue Category_Pizza Place

Figure 3. Top 10 Venue in Toronto

Top 10 Venue in New York:

Below are the top 10 venue in New York according to Neighborhoods.

	Neighborhood	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
0	Battery Park City	Venue Category_Park	Venue Category_Hotel	Venue Category_Gym	Venue Category_Coffee Shop	Venue Category_Shopping Mall	Venue Category_Memorial Site	Venue Category_Food Court
1	Carnegie Hill	Venue Category_Coffee Shop	Venue Category_Pizza Place	Venue Category_Café	Venue Category_Yoga Studio	Venue Category_Wine Shop	Venue Category_Japanese Restaurant	Venue Category_Bakery
2	Central Harlem	Venue Category_African Restaurant	Venue Category_Chinese Restaurant	Venue Category_Cosmetics Shop	Venue Category_Fried Chicken Joint	Venue Category_Seafood Restaurant	Venue Category_Bar	Venue Category_French Restaurant
3	Chelsea	Venue Category_Coffee Shop	Venue Category_Art Gallery	Venue Category_American Restaurant	Venue Category_Italian Restaurant	Venue Category_Seafood Restaurant	Venue Category_French Restaurant	Venue Category_Bakery
4	Chinatown	Venue Category_Chinese Restaurant	Venue Category_Cocktail Bar	Venue Category_Dessert Shop	Venue Category_Bakery	Venue Category_Vietnamese Restaurant	Venue Category_Optical Shop	Venue Category_Ice Cream Shop
		Venue		Venue	Venue Category_Italian	Venue Category_French	Venue Category_Gym /		

Figure 4. Top 10 Venue in New York

Clustering neighborhood in Toronto:

	Borough	Neighborhood	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
0	Downtown Toronto	Regent Park, Harbourfront	43.654260	-79.360636	1	Venue Category_Coffee Shop	Venue Category_Pub	Venue Category_Bakery	Venue Category_Park	Venue Category_Restaurant	Cat
1	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.662301	-79.389494	2	Venue Category_Coffee Shop	Venue Category_Diner	Venue Category_Yoga Studio	Venue Category_College Auditorium	Venue Category_Beer Bar	Cat
2	Downtown Toronto	Garden District, Ryerson	43.657162	-79.378937	1	Venue Category_Clothing Store	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Cosmetics Shop	Venue Category_Bubble Tea Shop	Cat
3	Downtown Toronto	St. James Town	43.651494	-79.375418	4	Venue Category_Café	Venue Category_Coffee Shop	Venue Category_Clothing Store	Venue Category_American Restaurant	Venue Category_Cocktail Bar	Cate
4	Downtown Toronto	Berczy Park	43.644771	-79.373306	1	Venue Category_Coffee Shop	Venue Category_Cheese Shop	Venue Category_Farmers Market	Venue Category_Café	Venue Category_Bakery	Ca

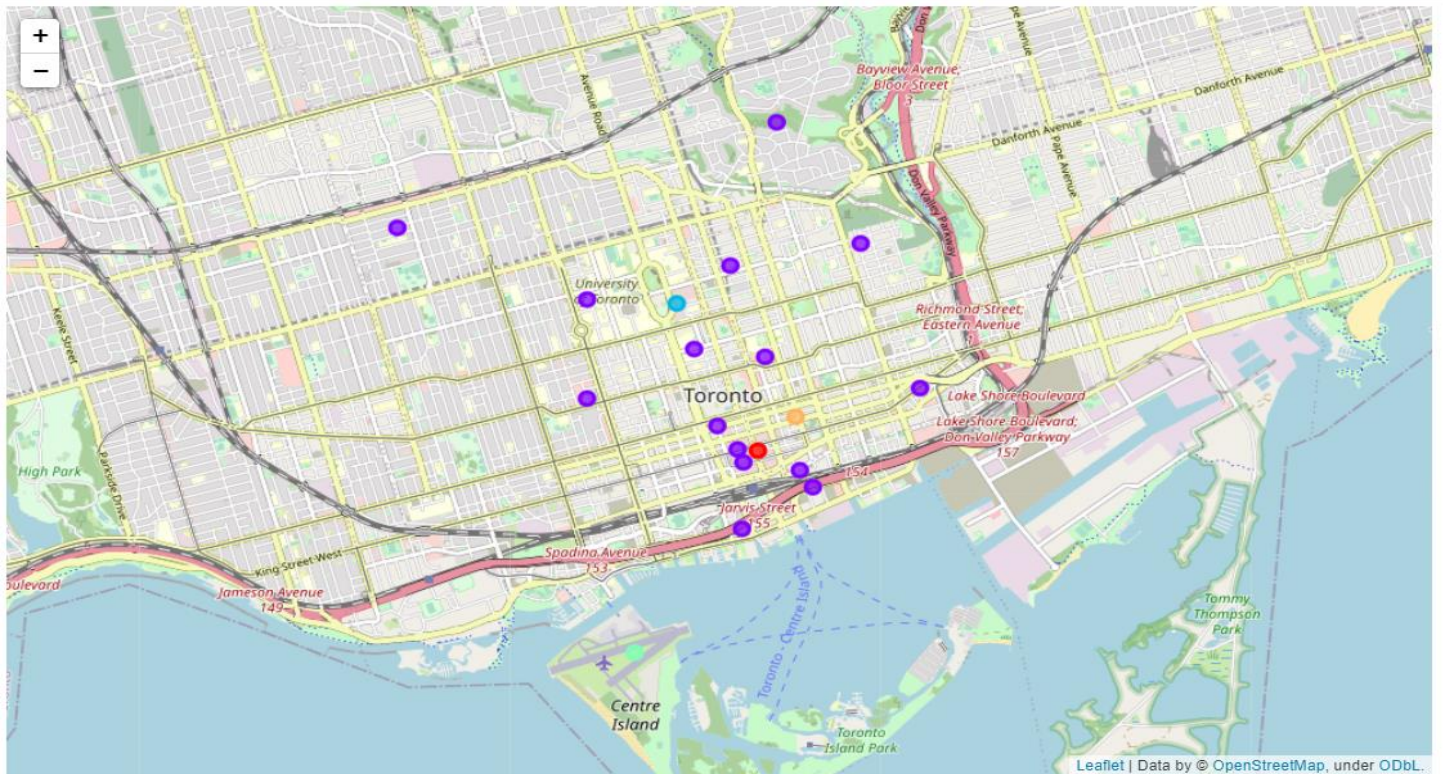Figure 5. Clustering Neighborhood in Toronto

Figure 6. Neighborhood in Toronto over map

Clustering Neighborhood in Manhattan:

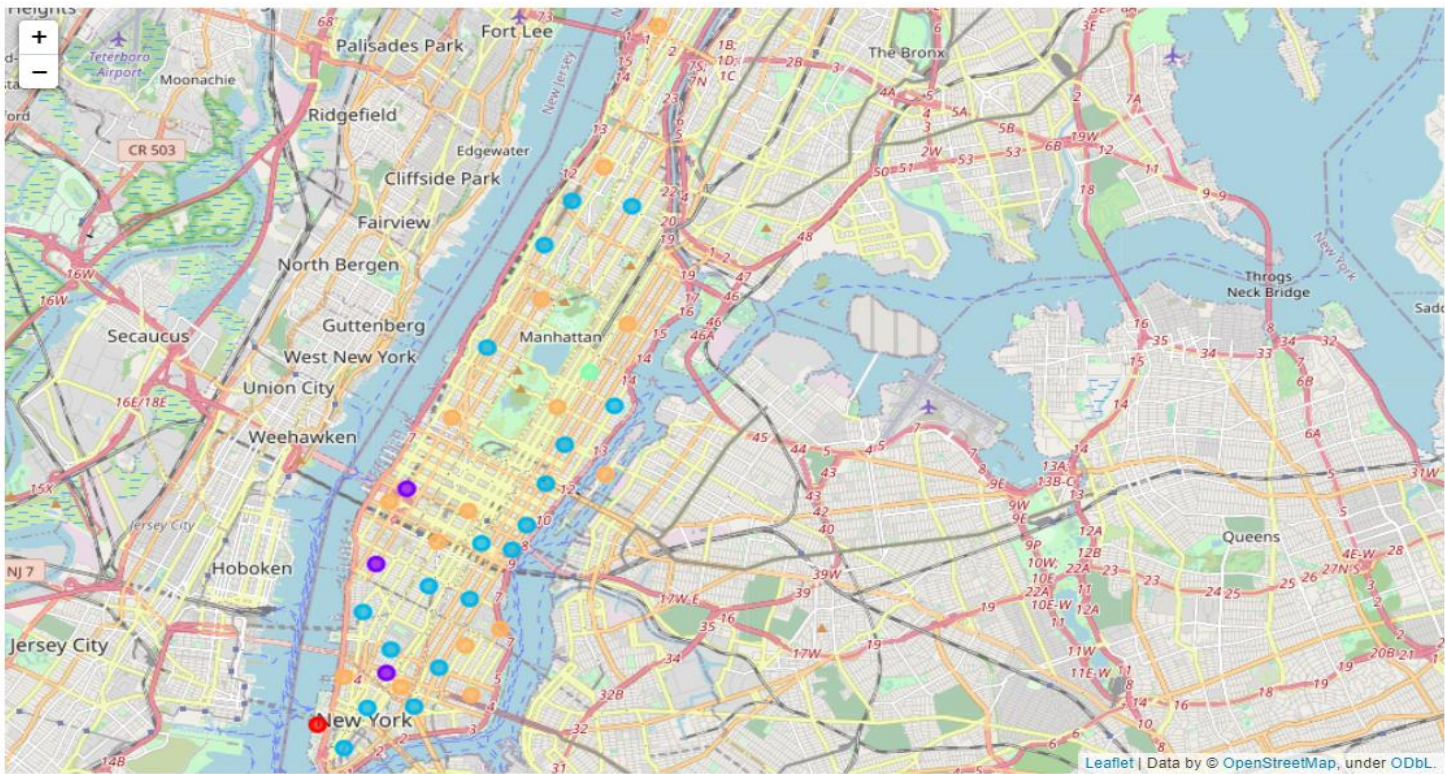|	Borough	Neighborhood	Latitude	Longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	
0	Manhattan	Marble Hill	40.876551	-73.910660	0	Venue Category_Gym	Venue Category_Sandwich Place	Venue Category_Coffee Shop	Venue Category_Yoga Studio	Venue Category_Deli / Bodega	Ca
1	Manhattan	Chinatown	40.715618	-73.994279	2	Venue Category_Chinese Restaurant	Venue Category_Dessert Shop	Venue Category_Cocktail Bar	Venue Category_Vietnamese Restaurant	Venue Category_Bakery	V
2	Manhattan	Washington Heights	40.851903	-73.936900	4	Venue Category_Café	Venue Category_Bakery	Venue Category_Bank	Venue Category_Mobile Phone Shop	Venue Category_Deli / Bodega	Ca
3	Manhattan	Inwood	40.867684	-73.921210	2	Venue Category_Lounge	Venue Category_Mexican Restaurant	Venue Category_Restaurant	Venue Category_Café	Venue Category_Park	
4	Manhattan	Hamilton Heights	40.823604	-73.949688	4	Venue Category_Pizza Place	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Mexican Restaurant	Venue Category_Deli / Bodega	

Figure. 7 Clustering Neighborhood in Manhattan

Figure. 8 Neighborhood in Manhattan over map

4. Examine Cluster:

Now, we can examine each cluster and determine the discriminating venue categories that distinguish each cluster for Toronto and New York City. Based on the defining categories, we can then assign a name to each cluster.

A. Toronto:

4.1 Cluster 1 (Airport Lounge, Coffee Shop, Cafe, Restaurants & Grocery Store)

	Neighborhood	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
10	Commerce Court, Victoria Hotel	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Restaurant	Venue Category_Hotel	Venue Category_American Restaurant	Venue Category_Gym	Venue Category_Italian Restaurant	Venue Category_Seafood Restaurant	Cate

Figure 9. Cluster 1 in Toronto

4.2 Cluster 2 (Gastropubs)

	Neighborhood	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 Co
0	Regent Park, Harbourfront	Venue Category_Coffee Shop	Venue Category_Pub	Venue Category_Bakery	Venue Category_Park	Venue Category_Restaurant	Venue Category_Breakfast Spot	Venue Categor
2	Garden District, Ryerson	Venue Category_Clothing Store	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Cosmetics Shop	Venue Category_Bubble Tea Shop	Venue Category_Japanese Restaurant	Category_ Res
4	Berczy Park	Venue Category_Coffee Shop	Venue Category_Cheese Shop	Venue Category_Farmers Market	Venue Category_Café	Venue Category_Bakery	Venue Category_Beer Bar	Category_S Res
5	Central Bay Street	Venue Category_Coffee Shop	Venue Category_Sandwich Place	Venue Category_Italian Restaurant	Venue Category_Japanese Restaurant	Venue Category_Café	Venue Category_Salad Place	Category_Dep
6	Christie	Venue Category_Grocery Store	Venue Category_Café	Venue Category_Park	Venue Category_Italian Restaurant	Venue Category_Baby Store	Venue Category_Diner	Category_Res
7	Richmond, Adelaide, King	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Bar	Venue Category_Clothing Store	Venue Category_Restaurant	Venue Category_Gym	Categor
8	Harbourfront East, Union Station, Toronto Islands	Venue Category_Coffee Shop	Venue Category_Aquarium	Venue Category_Hotel	Venue Category_Café	Venue Category_Fried Chicken Joint	Venue Category_Restaurant	Category_ Res
9	Toronto Dominion Centre, Design Exchange	Venue Category_Coffee Shop	Venue Category_Hotel	Venue Category_Café	Venue Category_Restaurant	Venue Category_Salad Place	Venue Category_Seafood Restaurant	Category_Ja Res
11	University of Toronto, Harbord	Venue Category_Café	Venue Category_Bookstore	Venue Category_Restaurant	Venue Category_Bar	Venue Category_Japanese Restaurant	Venue Category_Sandwich Place	Category_
12	Kensington Market, Chinatown, Grange Park	Venue Category_Vegetarian / Vegan Restaurant	Venue Category_Café	Venue Category_Coffee Shop	Venue Category_Bar	Venue Category_Vietnamese Restaurant	Venue Category_Mexican Restaurant	Category_Pizz
14	Rosedale	Venue Category_Park	Venue Category_Playground	Venue Category_Trail	Venue Category_Department Store	Venue Category_Electronics Store	Venue Category_Eastern European Restaurant	Category_D Res
15	Stn A PO Boxes	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Pub	Venue Category_Restaurant	Venue Category_Gym	Venue Category_Seafood Restaurant	Categor
16	St. James Town, Cabbagetown	Venue Category_Coffee Shop	Venue Category_Italian Restaurant	Venue Category_Park	Venue Category_Restaurant	Venue Category_Bakery	Venue Category_Pizza Place	Venue Categc

Figure 10. Cluster 2(Gastropubs)

4.3 Cluster 3 (Cafes)

	Neighborhood	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	
1	Queen's Park, Ontario Provincial Government	Venue Category_Coffee Shop	Venue Category_Diner	Venue Category_Yoga Studio	Venue Category_College Auditorium	Venue Category_Beer Bar	Venue Category_Smoothie Shop	Venue Category_Sandwich Place	Venue Category_Burrito Place	Categc

Figure 11. Cluster 3

4.4 Cluster 4 (Coffee Shop, Cafe, Park & Japanese Restaurant)

	Neighborhood	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	Comn
13	CN Tower, King and Spadina, Railway Lands, Har...	Venue Category_Airport Lounge	Venue Category_Airport Service	Venue Category_Airport Terminal	Venue Category_Sculpture Garden	Venue Category_Airport	Venue Category_Airport Food Court	Venue Category_Bar	Venue Category_Rental Car Location	Categor

Figure 12. Cluster 4

4.5 Cluster 5 (Seafood, steakhouse, Hotel & Cafe)

	Neighborhood	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
3	St. James Town	Venue Category_Café	Venue Category_Coffee Shop	Venue Category_Clothing Store	Venue Category_American Restaurant	Venue Category_Cocktail Bar	Venue Category_Cosmetics Shop	Venue Category_Restaurant	Venue Category_Diner

Figure 13. Cluster 5

B. Manhattan:
4.6 Residentail:

	Neighborhood	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 C
0	Marble Hill	Venue Category_Gym	Venue Category_Sandwich Place	Venue Category_Coffee Shop	Venue Category_Yoga Studio	Venue Category_Deli / Bodega	Venue Category_Supplement Shop	Venue Category_Steakhouse	Category_S
28	Battery Park City	Venue Category_Park	Venue Category_Hotel	Venue Category_Gym	Venue Category_Coffee Shop	Venue Category_Shopping Mall	Venue Category_Memorial Site	Venue Category_BBQ Joint	Category_

Figure 14. Residential in Manhattan

4.7 Commercial Places

	Neighborhood	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	Comn
14	Clinton	Venue Category_Gym / Fitness Center	Venue Category_Cocktail Bar	Venue Category_Sandwich Place	Venue Category_Italian Restaurant	Venue Category_Theater	Venue Category_Coffee Shop	Venue Category_American Restaurant	Categ
17	Chelsea	Venue Category_Coffee Shop	Venue Category_Art Gallery	Venue Category_American Restaurant	Venue Category_Bakery	Venue Category_French Restaurant	Venue Category_Italian Restaurant	Venue Category_Hotel	Category_ F
23	Soho	Venue Category_Italian Restaurant	Venue Category_Coffee Shop	Venue Category_Clothing Store	Venue Category_Boutique	Venue Category_Mediterranean Restaurant	Venue Category_Bakery	Venue Category_Seafood Restaurant	Categc B

Figure 15. Cluster for Commercial Places

4.8 Tourist Areas & Hubs

	Neighborhood	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
1	Chinatown	Venue Category_Chinese Restaurant	Venue Category_Dessert Shop	Venue Category_Cocktail Bar	Venue Category_Vietnamese Restaurant	Venue Category_Bakery	Venue Category_Spa	Venue Catego
3	Inwood	Venue Category_Lounge	Venue Category_Mexican Restaurant	Venue Category_Restaurant	Venue Category_Café	Venue Category_Park	Venue Category_Chinese Restaurant	Venue Catego
5	Manhattanville	Venue Category_Coffee Shop	Venue Category_Mexican Restaurant	Venue Category_Seafood Restaurant	Venue Category_Italian Restaurant	Venue Category_Bar	Venue Category_Deli / Bodega	Venue Cat
6	Central Harlem	Venue Category_African Restaurant	Venue Category_Seafood Restaurant	Venue Category_American Restaurant	Venue Category_Bar	Venue Category_French Restaurant	Venue Category_Chinese Restaurant	Category_
9	Yorkville	Venue Category_Italian Restaurant	Venue Category_Gym	Venue Category_Coffee Shop	Venue Category_Bar	Venue Category_Pizza Place	Venue Category_Sushi Restaurant	Venue Cate
10	Lenox Hill	Venue Category_Sushi Restaurant	Venue Category_Coffee Shop	Venue Category_Pizza Place	Venue Category_Italian Restaurant	Venue Category_Cocktail Bar	Venue Category_Café	Venue Categ Fitn
12	Upper West Side	Venue Category_Italian Restaurant	Venue Category_Coffee Shop	Venue Category_Bakery	Venue Category_Bar	Venue Category_Dessert Shop	Venue Category_Indian Restaurant	Category_Med
16	Murray Hill	Venue Category_Sandwich Place	Venue Category_Coffee Shop	Venue Category_American Restaurant	Venue Category_Japanese Restaurant	Venue Category_Mediterranean Restaurant	Venue Category_Gym / Fitness Center	Venue Cate
18	Greenwich Village	Venue Category_Italian Restaurant	Venue Category_Sushi Restaurant	Venue Category_Café	Venue Category_Bubble Tea Shop	Venue Category_Ice Cream Shop	Venue Category_Indian Restaurant	Venue Cate
24	West Village	Venue Category_Italian Restaurant	Venue Category_New American Restaurant	Venue Category_American Restaurant	Venue Category_Cocktail Bar	Venue Category_Park	Venue Category_Wine Bar	Venue Cate
26	Morningside Heights	Venue Category_Park	Venue Category_Bookstore	Venue Category_Coffee Shop	Venue Category_American Restaurant	Venue Category_Burger Joint	Venue Category_Sandwich Place	Venue Cate
27	Gramercy	Venue Category_Bar	Venue Category_Bagel Shop	Venue Category_Pizza Place	Venue Category_American Restaurant	Venue Category_Italian Restaurant	Venue Category_Coffee Shop	Category_
29	Financial District	Venue Category_Coffee Shop	Venue Category_Pizza Place	Venue Category_Café	Venue Category_Cocktail Bar	Venue Category_Gym / Fitness Center	Venue Category_Mexican Restaurant	Venue Cat

Figure. 16 Cluster for Tourist Area & Hubs

4.8 Center Activity

	Neighborhood	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	
30	Carnegie Hill	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Yoga Studio	Venue Category_Bookstore	Venue Category_Gym / Fitness Center	Venue Category_Gym	Venue Category_French Restaurant	Venue Category_Cosmetics Shop	Catego

Figure. 17 Cluster for Center activity

4.9 Cultural & Going Out Places

	Neighborhood	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
2	Washington Heights	Venue Category_Café	Venue Category_Bakery	Venue Category_Bank	Venue Category_Mobile Phone Shop	Venue Category_Deli / Bodega	Venue Category_Pizza Place	Venue Category_Latin American Restaurant
4	Hamilton Heights	Venue Category_Pizza Place	Venue Category_Coffee Shop	Venue Category_Café	Venue Category_Mexican Restaurant	Venue Category_Deli / Bodega	Venue Category_Yoga Studio	Venue Category_Chinese Restaurant
7	East Harlem	Venue Category_Mexican Restaurant	Venue Category_Thai Restaurant	Venue Category_Bakery	Venue Category_Latin American Restaurant	Venue Category_Deli / Bodega	Venue Category_Sandwich Place	Venue Category_Spa
8	Upper East Side	Venue Category_Italian Restaurant	Venue Category_Coffee Shop	Venue Category_Bakery	Venue Category_Gym / Fitness Center	Venue Category_Yoga Studio	Venue Category_Hotel	Venue Category_Juice Bar
11	Roosevelt Island	Venue Category_Park	Venue Category_Outdoors & Recreation	Venue Category_Residential Building (Apartment...	Venue Category_Scenic Lookout	Venue Category_Sandwich Place	Venue Category_Liquor Store	Venue Category_Noodle House
13	Lincoln Square	Venue Category_Plaza	Venue Category_Café	Venue Category_Gym / Fitness Center	Venue Category_Concert Hall	Venue Category_Performing Arts Venue	Venue Category_Theater	Venue Category_Italian Restaurant
15	Midtown	Venue Category_Hotel	Venue Category_Clothing Store	Venue Category_Bakery	Venue Category_Coffee Shop	Venue Category_Sporting Goods Shop	Venue Category_Theater	Venue Category_American Restaurant
19	East Village	Venue Category_Bar	Venue Category_Ice Cream Shop	Venue Category_Mexican Restaurant	Venue Category_Cocktail Bar	Venue Category_Pizza Place	Venue Category_Wine Bar	Venue Category_Speakeasy
20	Lower East Side	Venue Category_Chinese Restaurant	Venue Category_Bakery	Venue Category_Pizza Place	Venue Category_Café	Venue Category_Japanese Restaurant	Venue Category_Art Gallery	Venue Category_Coffee Shop
21	Tribeca	Venue Category_Italian Restaurant	Venue Category_Park	Venue Category_Wine Bar	Venue Category_Spa	Venue Category_Greek Restaurant	Venue Category_American Restaurant	Venue Category_Coffee Shop
22	Little Italy	Venue Category_Bakery	Venue Category_Coffee Shop	Venue Category_Chinese Restaurant	Venue Category_Bubble Tea Shop	Venue Category_Café	Venue Category_Italian Restaurant	Venue Category_Seafood Restaurant
25	Manhattan Valley	Venue Category_Mexican Restaurant	Venue Category_Bar	Venue Category_Thai Restaurant	Venue Category_Pizza Place	Venue Category_Coffee Shop	Venue Category_Yoga Studio	Venue Category_Indian Restaurant
33	Midtown South	Venue Category_Korean Restaurant	Venue Category_Hotel	Venue Category_Japanese Restaurant	Venue Category_Dessert Shop	Venue Category_Gym / Fitness Center	Venue Category_Salad Place	Venue Category_Cosmetics Shop

Figure. 18 Cluster for Cultural and Going Out Places.

5. Result

After clustering the data of the respective neighborhoods, both cities (Boroughs) have venues which can be explored and attract the Tourists. The neighborhoods are much similar in features like Theaters, opera houses, food places, clubs, museums, parks etc. As far as concern to dissimilarity, it differs in terms of some unique places like historical places and monuments.

6. Observations & Recommendations

When we compare the tourist places, we observe that the historical place is only situated in Downtown Toronto and the Monument or landmark venue is in Manhattan neighborhoods. Similarly, Airport facility, Harbor, Sculpture garden and Boat or ferry services are also available in Downtown Toronto while venues like Nightlife, Climbing gym and Museums are present in Manhattan. As far as concern to recommendations, we recommend Downtown Toronto Neighborhoods will be considered first to visit. The tourists have an easily travelling access due to Airport facility, which not only saves time but also helps to save money. This saved money can be utilized to explore more, the attracting venues.

7. Conclusion

The downtown Toronto and Manhattan neighborhoods have more like similar venues. As we know that every place is unique in its own way, so that's argument is present in both neighborhoods. The dissimilarity exists in terms of some different venues and facilities but not on a larger extent.