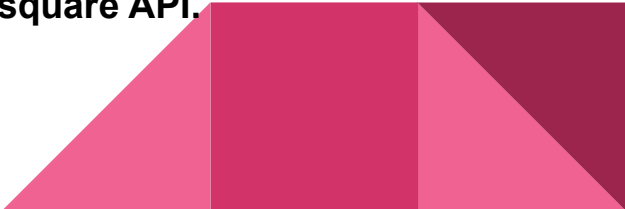


PROBLEM DESCRIPTION

- 1. Explore similarities and dissimilarities between the cities of Toronto and New York from tourist perspective.**
- 2. Exploration on the basis of food, accomodation, places to visit, etc.**
- 3. Tourists can decide which place to visit on basis of their taste.**



DATA ACQUISITION

- 1) List of Boroughs and their corresponding Neighborhoods in Toronto, Canada taken from https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M
 - 2) Geographical coordinates of every postal code in Toronto, Canada taken from https://cocl.us/Geospatial_data
 - 3) Dataset containing the Boroughs and the Neighborhoods that exist in each borough along with the geographical coordinates of each neighborhood taken from https://cocl.us/new_york_dataset
 - 4) Venues and nearby places related information taken from Foursquare API.
- 

DATA FRAME BEFORE CLUSTERING

Out[35]:

	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 Most Common Venue	10th Most Common Venue
0	Berczy Park	Seafood Restaurant	Cheese Shop	Farmers Market	Beer Bar	Basketball Stadium	Bakery	Restaurant	Concert Hall	Breakfast Spot	Bistro
1	CN Tower, King and Spadina, Railway Lands, Har...	Airport Service	Airport Lounge	Airport Terminal	Plane	Harbor / Marina	Rental Car Location	Bar	Boat or Ferry	Sculpture Garden	Coffee Shop
2	Central Bay Street	Coffee Shop	Café	Sushi Restaurant	Modern European Restaurant	Bubble Tea Shop	Ramen Restaurant	Middle Eastern Restaurant	Sandwich Place	Bar	Spa
3	Christie	Grocery Store	Café	Park	Italian Restaurant	Candy Store	Coffee Shop	Nightclub	Restaurant	Baby Store	Athletics & Sports
4	Church and Wellesley	Pizza Place	Park	Restaurant	Bookstore	Ramen Restaurant	Breakfast Spot	Bubble Tea Shop	Burger Joint	Mexican Restaurant	Beer Bar

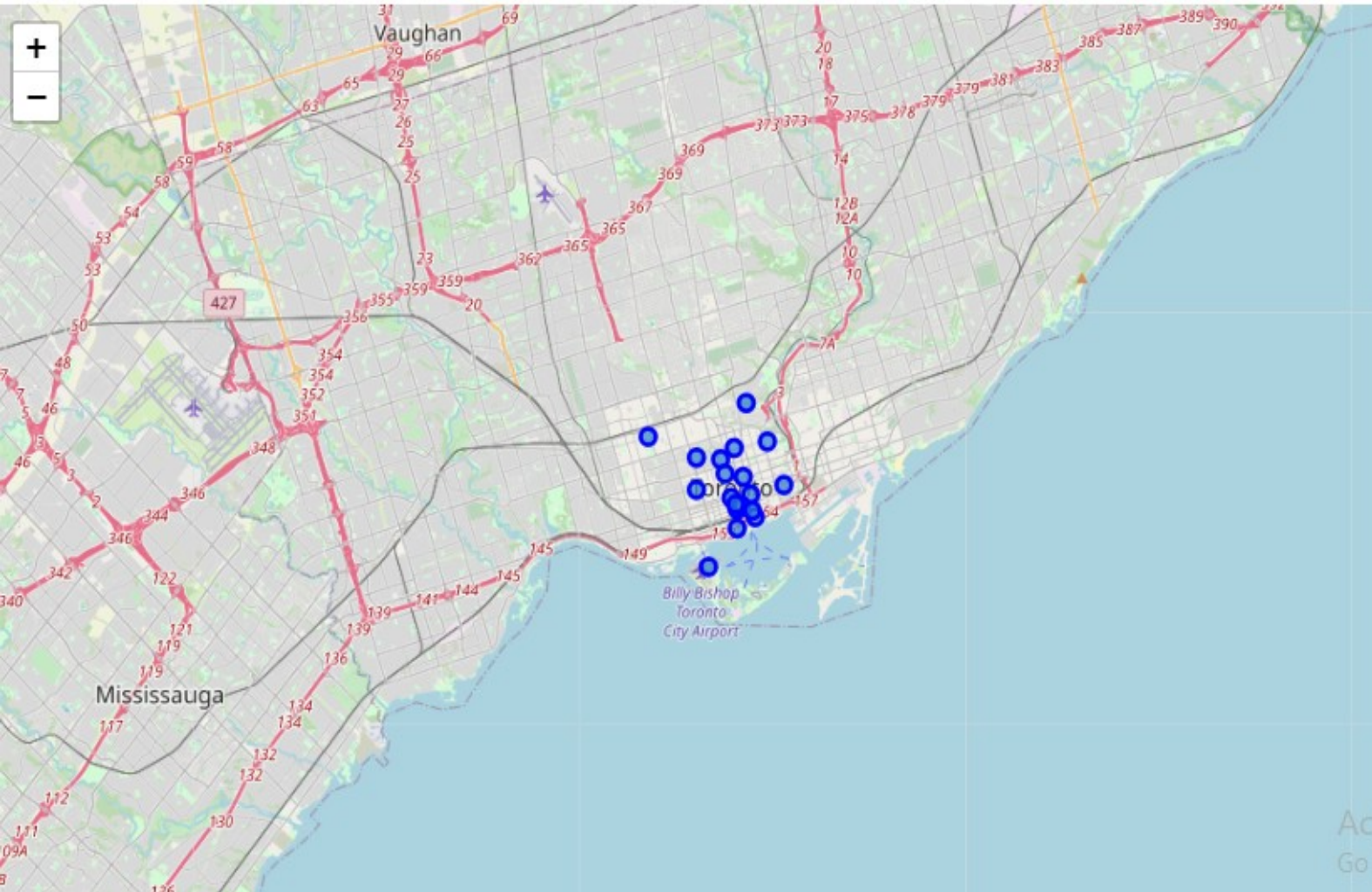
DOWNTOWN TORONTO

DATA FRAME BEFORE CLUSTERING

Out[50]:

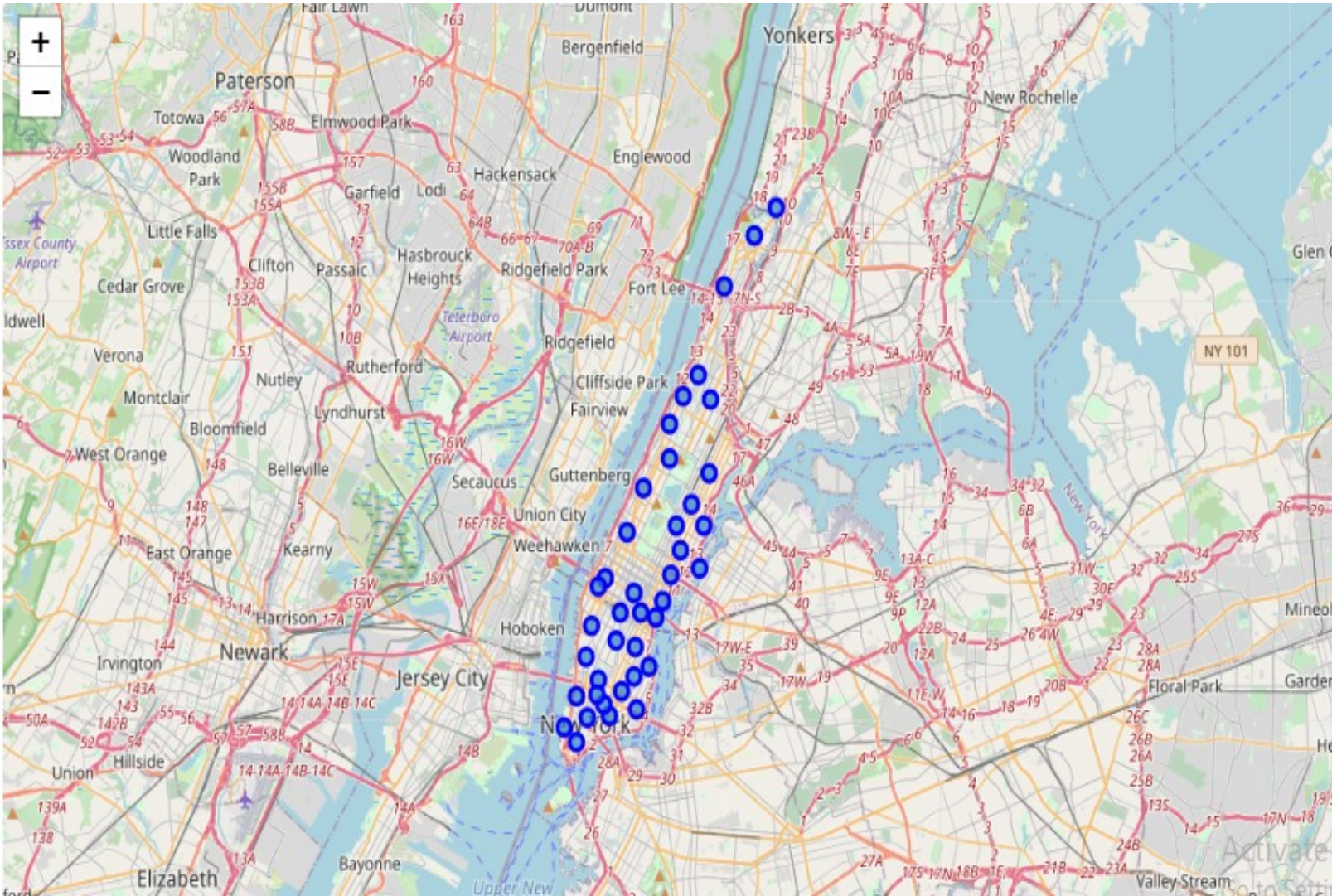
	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Battery Park City	Memorial Site	Park	Food Court	Plaza	Gym	Smoke Shop	Shopping Mall	Scenic Lookout	Sandwich Place	Monument / Landmark
1	Carnegie Hill	Italian Restaurant	Gym / Fitness Center	Gym	Wine Bar	Dance Studio	Pizza Place	American Restaurant	Spa	Bookstore	Shoe Store
2	Central Harlem	French Restaurant	African Restaurant	Juice Bar	Café	Music Venue	Boutique	Cocktail Bar	Ethiopian Restaurant	Library	Beer Bar
3	Chelsea	Seafood Restaurant	Ice Cream Shop	Theater	Market	Taco Place	Chinese Restaurant	Office	Fish Market	Coffee Shop	Scenic Lookout
4	Chinatown	Sandwich Place	Chinese Restaurant	Indie Movie Theater	Tea Room	Hotpot Restaurant	Ice Cream Shop	Greek Restaurant	Museum	English Restaurant	New American Restaurant

MANHATTAN



MAP OF DOWNTOWN TORONTO BEFORE CLUSTERIN G

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MAP OF MANHATTAN BEFORE CLUSTERING

DATA FRAME AFTER CLUSTERING

Out[37]:

	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 Most Common Venue	7th Most Common Venue	8th Most Common Venue
0	Downtown Toronto	Regent Park, Harbourfront	43.654260	-79.360636	1	Coffee Shop	Park	Breakfast Spot	Farmers Market	Chocolate Shop	Pub	Restaurant	Performing Arts Venue
1	Downtown Toronto	Queen's Park, Ontario Provincial Government	43.662301	-79.389494	4	Coffee Shop	Sushi Restaurant	Wings Joint	Park	Arts & Crafts Store	Beer Bar	Burrito Place	Creperie
2	Downtown Toronto	Garden District, Ryerson	43.657162	-79.378937	0	Café	Mexican Restaurant	Shopping Mall	Restaurant	Ramen Restaurant	Coffee Shop	Plaza	Steakhouse
3	Downtown Toronto	St. James Town	43.651494	-79.375418	3	Gastropub	Coffee Shop	Café	Creperie	Art Gallery	BBQ Joint	Italian Restaurant	Cosmetics Shop
4	Downtown Toronto	Berczy Park	43.644771	-79.373306	1	Seafood Restaurant	Cheese Shop	Farmers Market	Beer Bar	Basketball Stadium	Bakery	Restaurant	Concert Hall

Activate Windows

**DOWNTOWN
TORONTO**

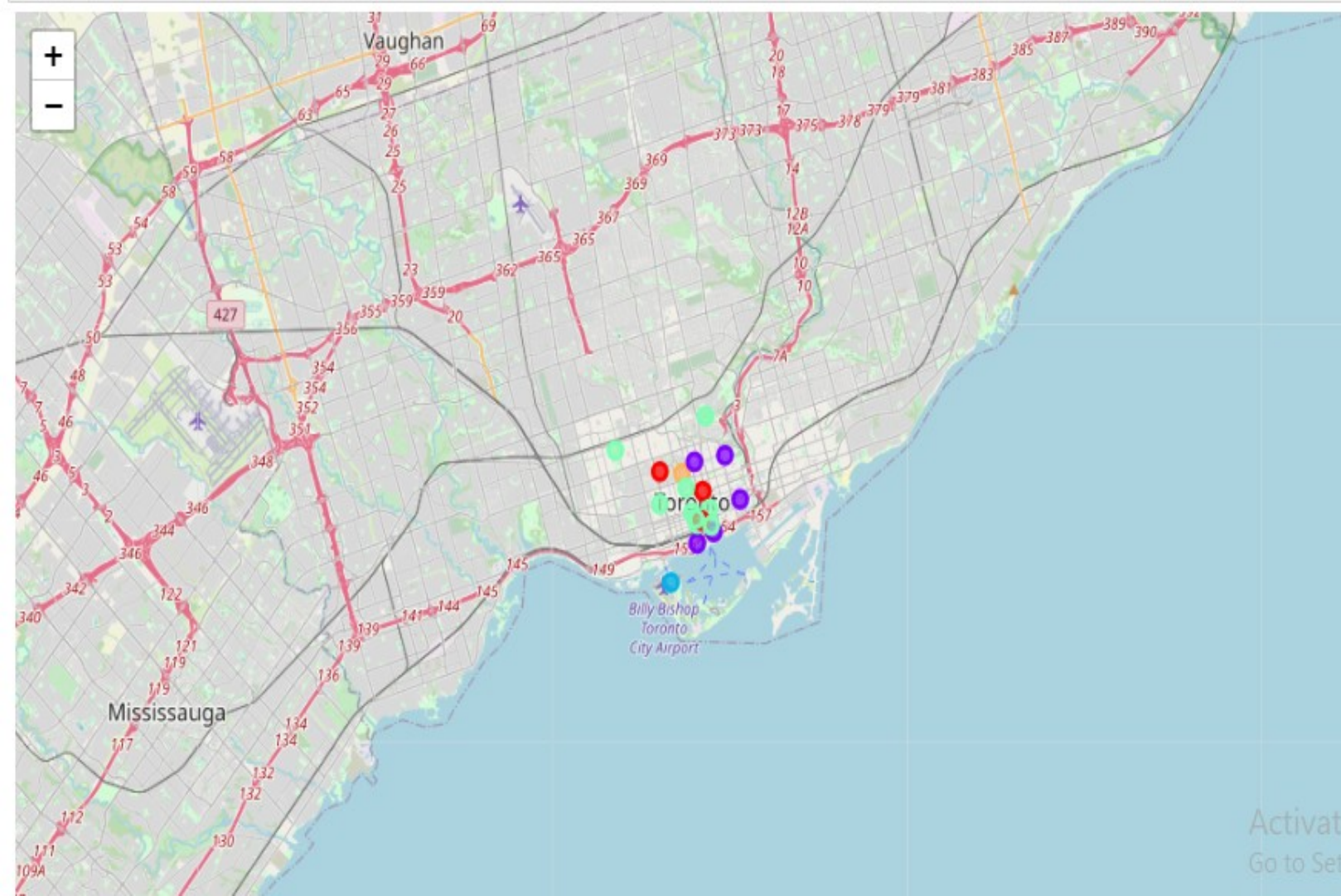
DATA FRAME AFTER CLUSTERING

Out[52]:

	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 Most Common Venue	7th Most Common Venue	8th Most Common Venue
0	Manhattan	Marble Hill	40.876551	-73.910660	1	Coffee Shop	Gym	Yoga Studio	Pharmacy	Seafood Restaurant	Steakhouse	Supplement Shop	Sandwich Place
1	Manhattan	Chinatown	40.715618	-73.994279	0	Sandwich Place	Chinese Restaurant	Indie Movie Theater	Tea Room	Hotpot Restaurant	Ice Cream Shop	Greek Restaurant	Museum
2	Manhattan	Washington Heights	40.851903	-73.936900	3	Wine Shop	Park	Café	Breakfast Spot	Bakery	Pet Café	Pizza Place	Ramen Restaurant
3	Manhattan	Inwood	40.867684	-73.921210	0	Wine Bar	Café	Park	Yoga Studio	Diner	Spanish Restaurant	Farmers Market	Frozen Shop
4	Manhattan	Hamilton Heights	40.823604	-73.949688	0	Yoga Studio	Mexican Restaurant	Cocktail Bar	Bakery	Historic Site	Italian Restaurant	Japanese Restaurant	Mediterranean Restaurant

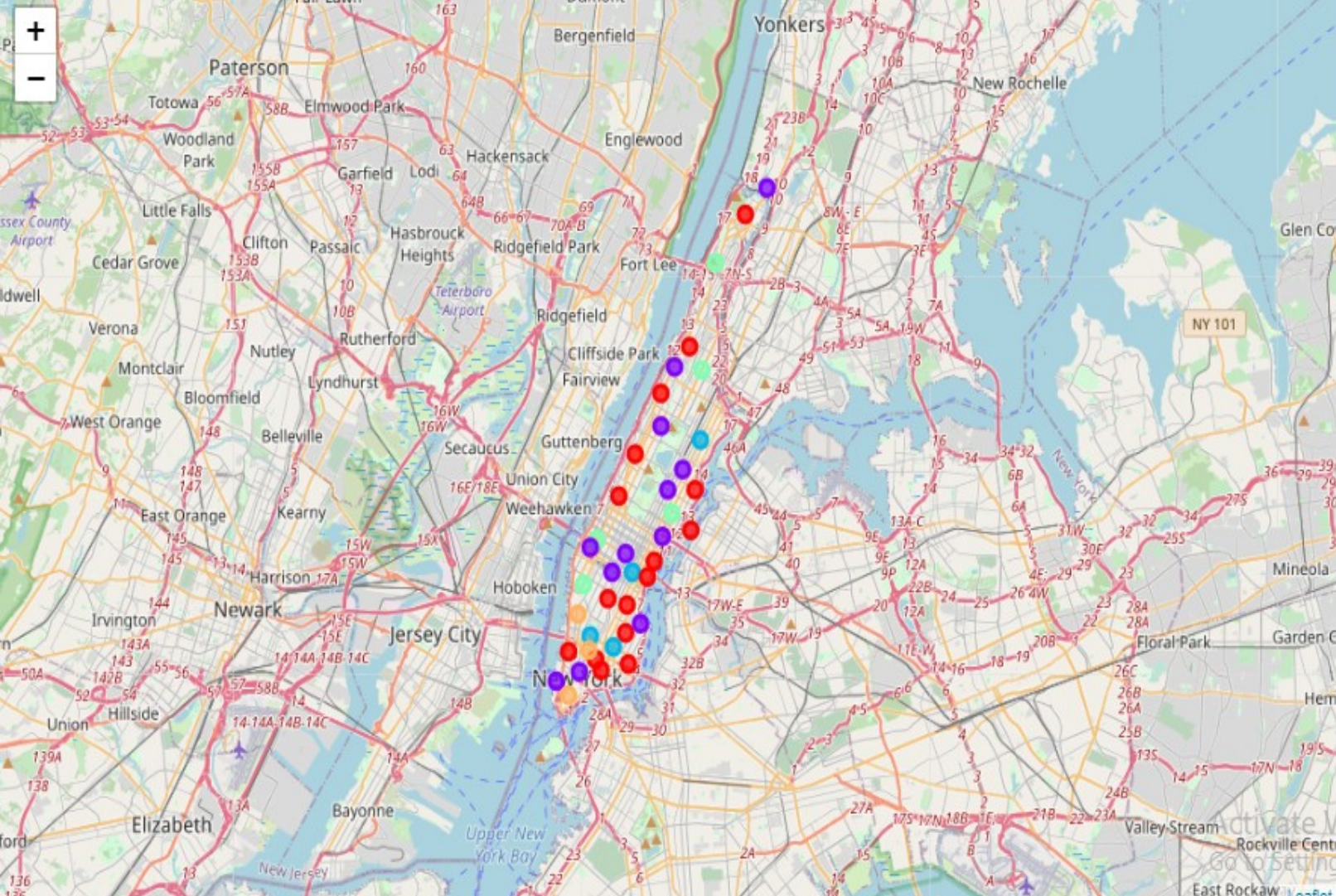
Activate Windows

MANHATTAN

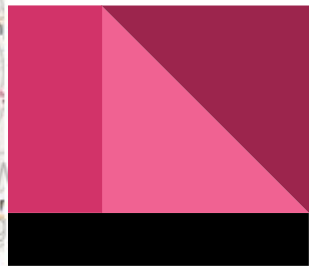


MAP OF DOWNTOWN TORONTO AFTER CLUSTERING


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MAP OF MANHATTAN AFTER CLUSTERING



OBSERVATIONS & RECOMMENDATIONS

- 1. Historical place in Downtown Toronto & Monument in Manhattan**
 - 2. Airport facility, Harbor, Sculpture garden and Boat or ferry services in Downtown Toronto & Nightlife, Climbing gym and Museums in Manhattan**
 - 3. Downtown Toronto Neighborhoods recommended to visit first. The tourists have easy travelling access due to the Airport facility.**
- 

CONCLUSION

- 1. The Downtown Toronto and Manhattan neighborhoods have more like similar venues.**
- 2. Every place is unique in its own way, so that argument is present in both neighborhoods.**
- 3. The dissimilarity exists in terms of some different venues and facilities but not on a larger extent.**

