Capstone Project
The battle of the Neighborhoods

Anthony Giorgio - Presentation

Moving up from Toronto to New York

- Toronto is the provincial capital of Ontario. With a recorded population of 2,731,571 in 2016, it is the most populous city in Canada and the fourth most populous city in North America. Toronto is an international centre of business, finance, arts, and culture, and is recognized as one of the most multicultural and cosmopolitan cities in the world.
- New York City, often called simply New York and abbreviated as NYC, is the most populous city in the United States. With an estimated 2019 population of 8,336,817. New York City has been described as the cultural, financial, and media capital of the world, significantly influencing commerce, entertainment, research, technology, education, politics, tourism, art, fashion, and sports.
- Suppose a friend who live on the west side of the city of Toronto in Canada, receive a job offer from a great company in New York, Manhattan borough. He has to move to New York City. He love his neighborhood in Toronto beacause of its variety of venues for food, parks, schools and entertainment places. Consequently he want to move in a similar zone in Manhattan borough.

Data acquisition and cleaning

- For this project we need the following data :
- New York City data that contains list Boroughs, Neighborhoods along with their latitude and longitude.
  - Data source : https://cocl.us/new_york_dataset
- Toronto data that contains list Boroughs, Neighborhoods along with their latitude and longitude
  - Data source: https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M , http://cocl.us/Geospatial_data

Toronto / Manhattan data

	Postal Code	Borough	Neighborhood	Latitude	Longitude
0	M4E	East Toronto	The Beaches	43.676357	-79.293031
1	M4K	East Toronto	The Danforth West, Riverdale	43.679557	-79.352188
2	M4L	East Toronto	India Bazaar, The Beaches West	43.668999	-79.315572
3	M4M	East Toronto	Studio District	43.659526	-79.340923
4	M4N	Central Toronto	Lawrence Park	43.728020	-79.388790

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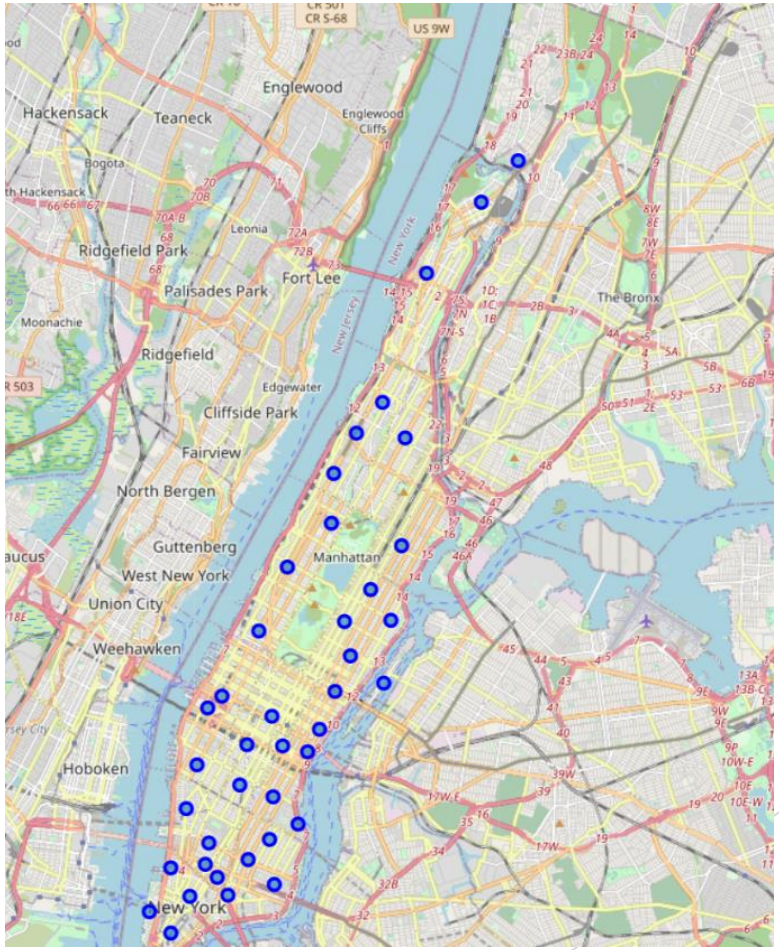
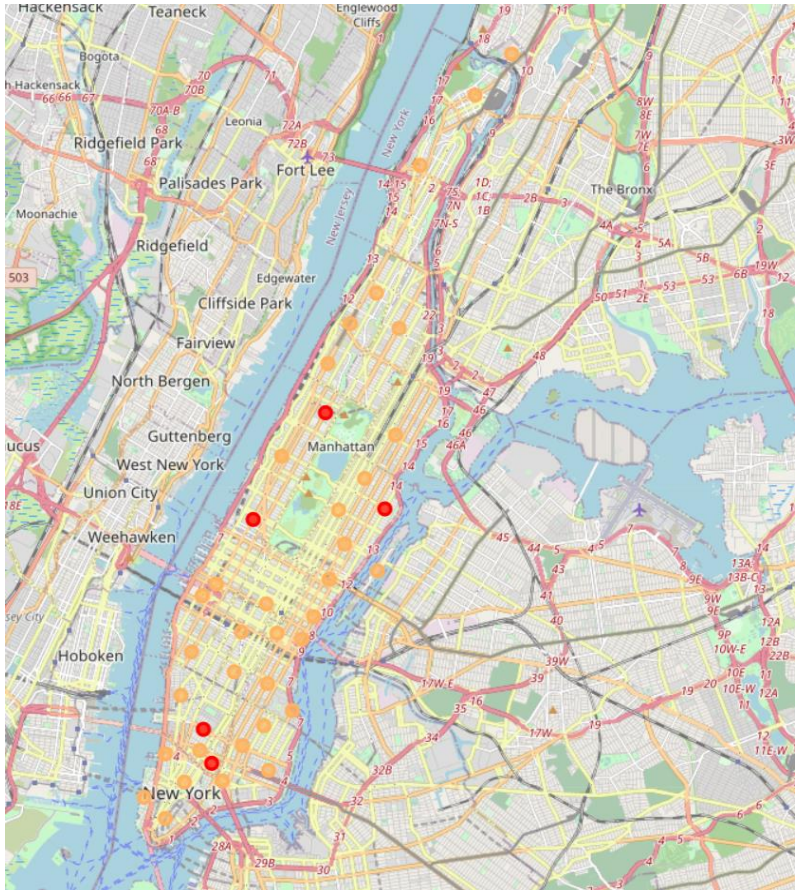
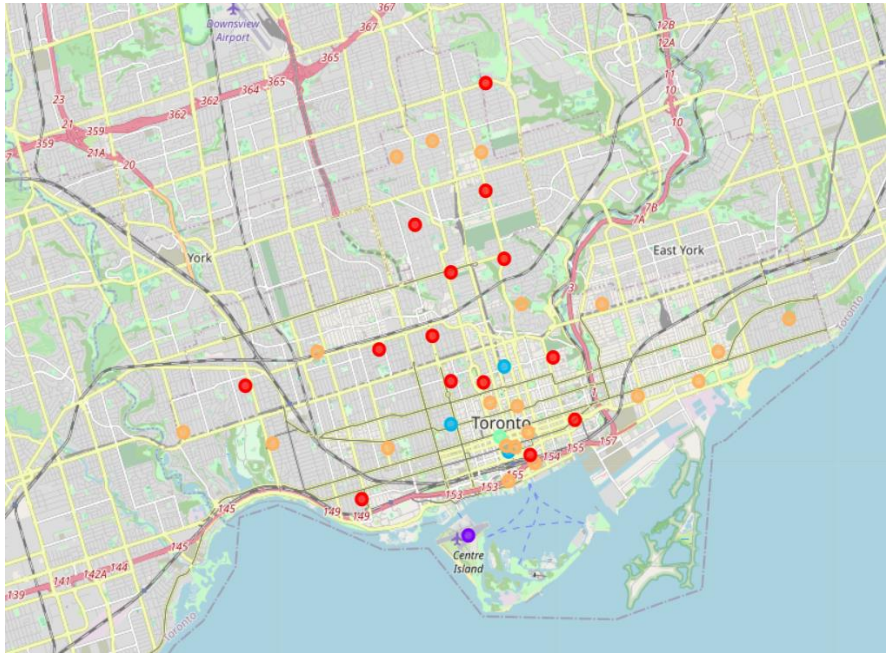
	Borough	Neighborhood	Latitude	Longitude
0	Manhattan	Marble Hill	40.876551	-73.910660
1	Manhattan	Chinatown	40.715618	-73.994279
2	Manhattan	Washington Heights	40.851903	-73.936900
3	Manhattan	Inwood	40.867684	-73.921210
4	Manhattan	Hamilton Heights	40.823604	-73.949688

Visualize Neighborhoods location







Clustering by venues and visualization

Conclusion

- The aim of this analysis was to find out similar neighborhoods for a person relocating in New York city. The maps above show us that if your friend want to move from a neighborhood in Toronto to a neighborhood in Manhattan, he has to choose the neighborhood with the same color displayed if he want to find the same kind of venues of his living zone
- Consequently our friend is lucky if he live in an orange or red zone of the map above in Toronto.

- The model created can easily be replicated again and again with data from other cities by using the Foursquare API. This show us the potentiality of Data Science in real life problems