Which city to move at

# Introduction

Suppose I received two job offers, one at Manhattan and one at Old (Downtown) Toronto. Regardless of the job opportunities I want to consider which is the best place for me to move at. My main concerns are how busy these places are, and which one has many good options of coffee shops, restaurants, and bars. These are the features I am going to compare to make my decision.

# Datasets

The data I am going to use is the one provided from the Coursera courses for both cities. I am going to work only with these two boroughs as they are the busiest boroughs of their cities. For Toronto, the data is acquired from <https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M> and the geospatial locations from <http://cocl.us/Geospatial_data>. For New York, from <https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBMDeveloperSkillsNetwork-DS0701EN-SkillsNetwork/labs/newyork_data.json>. The only step left is to specify the borough I am interested in from each city.

# Methodology & Results

First things first, these boroughs, even thought they are the busiest in their cities, they are different both population-wise and size-wise. Therefore, before comparing their venues we need to take into consideration the relationship between their features and how crowded they are. Having these in mind we can compare later their venues in a more efficient way, i.e., instead of comparing the total number of restaurants, it would be more useful to compare number of restaurants per citizen or per kilometre squared.

By performing some simple basic calculations, we notice Manhattan is around 3.5 times more crowded than Old Toronto. In addition, Manhattan has slightly more than double the population of Old Toronto, but Old Toronto is about 65% bigger than Manhattan.

Next, we obtain datasets of their venues we are interested in by looking at the keywords “Coffee”, “Restaurant” and “Bar” in the datasets. Old Toronto has 126 coffee places, 292 restaurants and 74 bars, while Manhattan has 152, 893 and 243, respectively. We produce histograms to compare the amount of these venues for every neighbourhood first as they are, and then normalised by population and by area.

Comparing based on venues per kilometre squared there is no doubt that Manhattan many more than Old Toronto. However, comparing based on venues per citizen although Manhattan has more restaurants and bars, Old Toronto has more coffee places and Manhattan has only a few in each neighbourhood. Therefore, for this case we plot maps for coffee shops in both places to compare them.

# Conclusion

Manhattan is more suitable for someone that wants to have many options for food and nightlife and enjoys living in crowded areas. On the other hand, Old Toronto is a better choice for people that enjoy less busy neighbourhoods and enjoy having a variety of coffee places to relax at. Graphs and map illustrations are displayed in the project presentation.