# Finding the best borough for expatriation

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1. Introduction / Business case

A friend of mine works for an international company that offers him to join one of their north American office. He has to choose between **Toronto**, **Montreal** and **New-York** office and ask me help for the decision. My friend lives in the 11th arrondissement (borough) of **Paris** and really likes his living environment. I will try to give some clues based on location data analysis to find the city that most similar to Paris. We will try to answer to the below question that will help my friend.

1. Which city between Toronto, Monreal or New-York is the most similar to Paris?
2. Which borough (arrondissement) is closet to Paris 11th arrondissement?

## Data

In this work, we will use the following datasets:

* **Paris\_Data** : this dataset provides the list of Paris’s boroughs and neighborhoods

|  |  |  |
| --- | --- | --- |
| **PostalCode** | **Borough** | **Neighborhood** |
| 75001 | Le Louvre | Saint-Germain-l'Auxerrois |
| 75001 | Le Louvre | Les Halles |
| 75001 | Le Louvre | Le Palais-Royal |
| 75001 | Le Louvre | La Place-Vendôme |

* **Montreal\_Data** : This is data exposed in Montreal official website : <http://donnees.ville.montreal.qc.ca/dataset/00bd85eb-23aa-4669-8f1b-ba9a000e3dd8/resource/e9b0f927-8f75-458c-8fda-b5da65cc8b73/download/limadmin.json>

This json format file will be used to create Montreal dataframe in the model of Paris\_Data.

* **Toronto\_Data** : dataset containing Toronto boroughs and neighborhoods that we download from Wikipedia: <https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M>'
* **New\_york\_Data**: this contains New York list of boroughs and neighborhoods: <https://cocl.us/new_york_dataset>
* We will also use Foursquare API data to explore venues of each city and its boroughs

The dataset will be used with kmeans clustering algorithm to get how Paris is similar or dissimilar to each city. Then to identify which borough is closet to Paris 11th arrrondissement.