

# Comparison between Neighborhoods of New York City and the city of Toronto

# Comparison between neighborhoods of both countries are important for Investing strategy

- Prosperity of neighborhoods of any country creates life standard of that country
- Living cost and many other parameters are high in New York in comparison of Toronto while both are same level city in their respective countries.

# Data acquisition

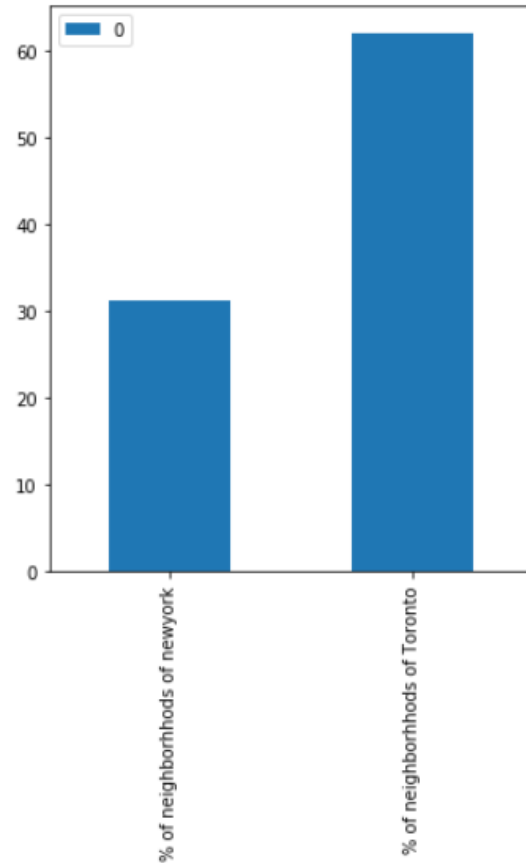
- New York data will be scraped from below link  
[https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset)
- 2-Toronto Data will be scraped from below link  
[https://en.wikipedia.org/wiki/List\\_of\\_postal\\_codes\\_of\\_Canada:\\_M](https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M)
- 3-geocoder package for collecting Postal code, latitudes, longitudes of Neighborhoods.
- **Foursquare API** for collecting venues data

# Data Cleaning

- Rows have been dropped where Borough is not assigned.
- value of Neighborhoods have been replace with name of Borough if Neighborhoods is not assigned.
- All neighborhoods have been assign in same cell if postal code is same.

63% Neighborhoods of Toronto has less than 50 venues within 500-meter radius while percentage in New York is 30%

percentage of neighborhoods in both countries where number of venues is less than 50 within 500 meter radius

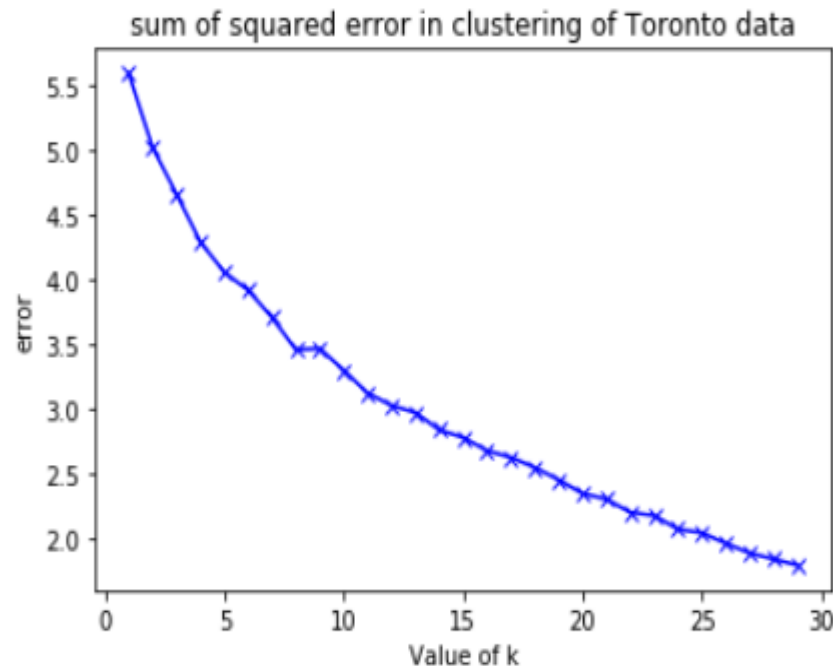


# Neighborhoods of new York wins the race regarding diversity of categories of venues.



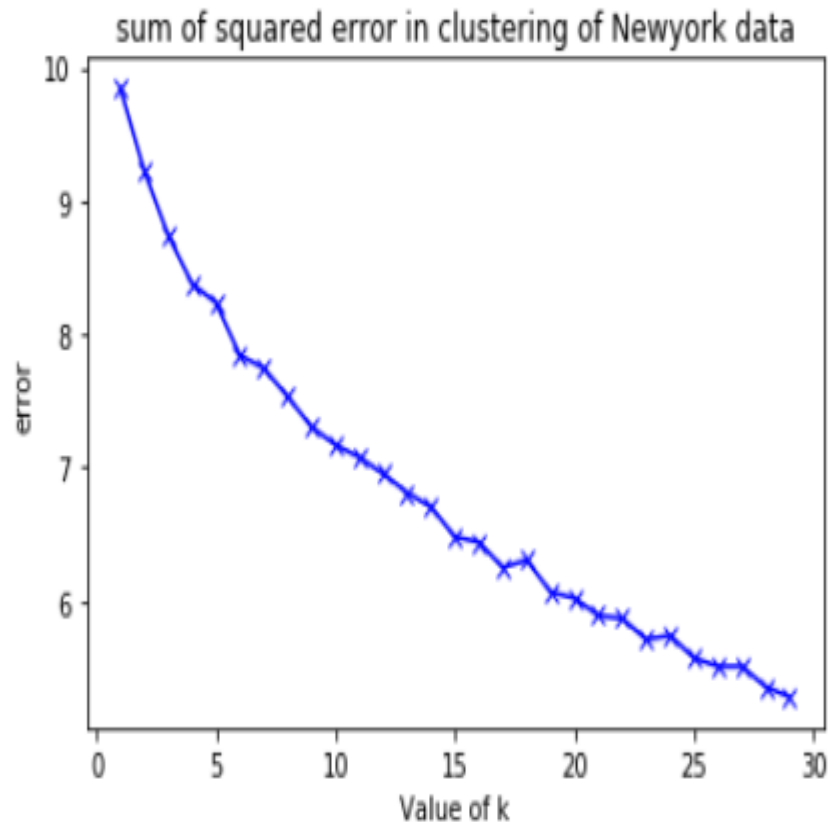
# Clustering of neighborhoods of Toronto

- Sum of squared error graph for clusters
- Error is less than 1 if clusters are 30



# Clustering of neighborhoods of New York

- Sum of squared error graph for clusters
- Error is more than 5 if clusters are 30





# Conclusion and future directions

- Toronto is collection of small neighborhoods while New York is collection of big neighborhoods
- Neighborhoods of New York wins the race regarding diversity of categories of venues. We can conclude that Neighborhoods of New York has more unique type of venues than Toronto.
- if we want to divide neighborhoods of each countries in groups then we need more groups for New York data. We can conclude that neighborhoods of New York have more difference with each other while Toronto Neighborhoods have less difference between each other.
- Further analysis will be done in next project