

Battle of Neighbourhoods

Business Problem:

Introduction

This project will analyse neighbourhoods between Toronto- Canada and New York City- New York, USA. The borough Scarborough population is 6.32 lakhs, whereas Queens has population of 22.7 lakhs.

A Fortune 500 company plans to move its headquarters to a city that has good standard of living and quality of life. This project will work on the advantages and disadvantages between boroughs in two cities and determine which neighbourhood will be the best fit for the company's employees and headquarters.

Objective

Understand the similarities and differences of neighbourhoods between Scarborough in Toronto and Queens in New York city

To select the best neighbourhood for a Fortune 500 company to move its headquarters based on venues

Questions that can be raised

- Collect the neighbourhoods top venues
- Form neighbourhood based on venue categories using unsupervised k-means clustering algorithm
- Identify and understand the similarities and differences between the two borough neighbourhoods to obtain insights into the neighbourhoods
- Find where the population is dense and variety of venues

Data Description:

The data used for this project will be acquired from the respective cities Wikipedia website pages. The datasets consists of the postal codes, neighbourhood names, latitude, and longitude information for each neighbourhood. Foursquare API search feature will be used to collect neighbourhood venue information. Details about local venues and locality will be provide insight into the qualities of a neighbourhood. In addition to Foursquare, various python packages will be used to create maps and machine learning models to further provide insights into our neighbourhood battle project.

For this project I've used the following data :

Toronto Neighbourhoods - https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M.

Toronto Latitude and Longitude - http://cocl.us/Geospatial_data

New York City neighbourhoods- https://geo.nyu.edu/catalog/nyu_2451_34572

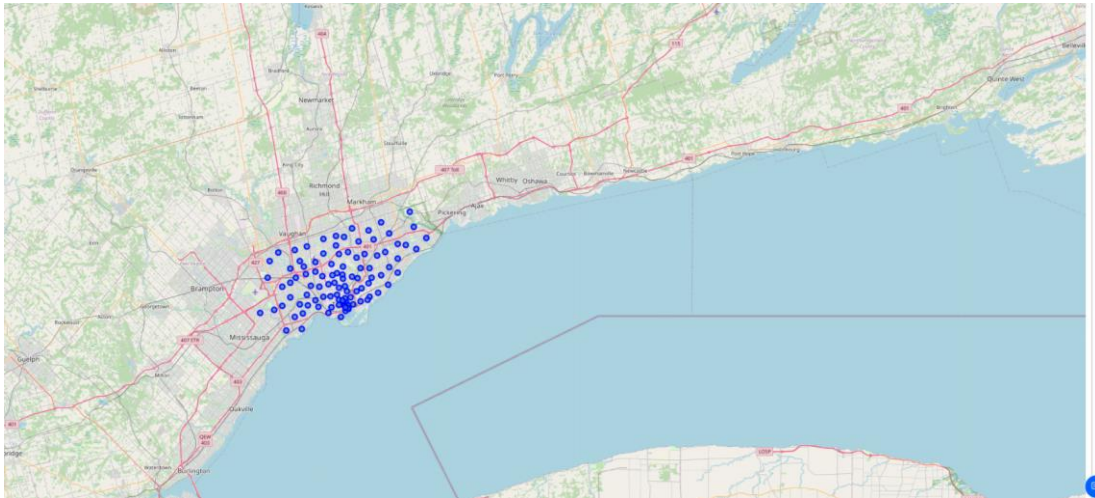
New York City Latitude and Longitude = Python Geolibrar

Description : This data set contains the required information. And we will use this data set to explore various venues in Scarborough -Toronto, Canada vs Queens- New York, USA.

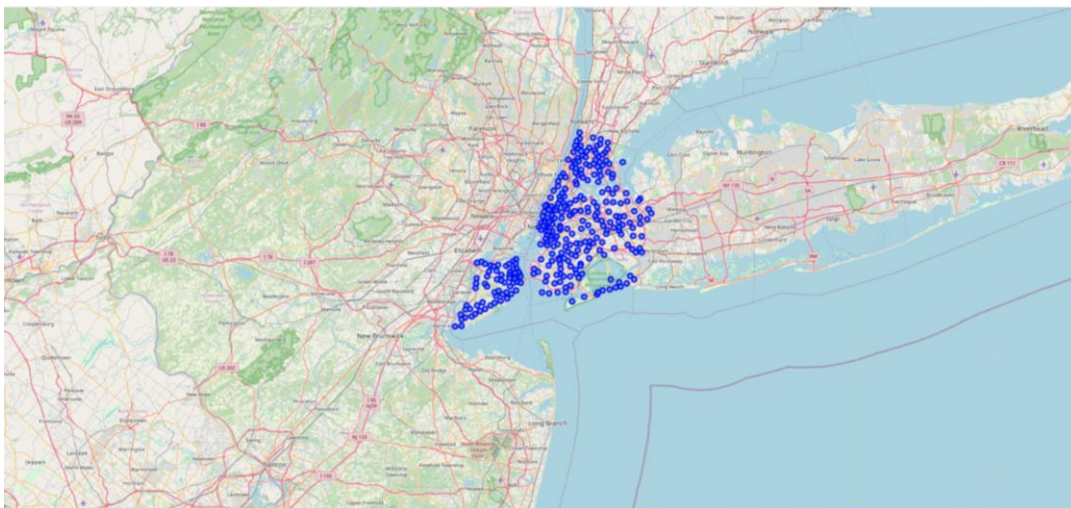
Data source : Foursquare API : "<https://developer.foursquare.com/>"

Description : By using this API we will get all the venues in each neighbourhood.

Map of Scarborough in Toronto

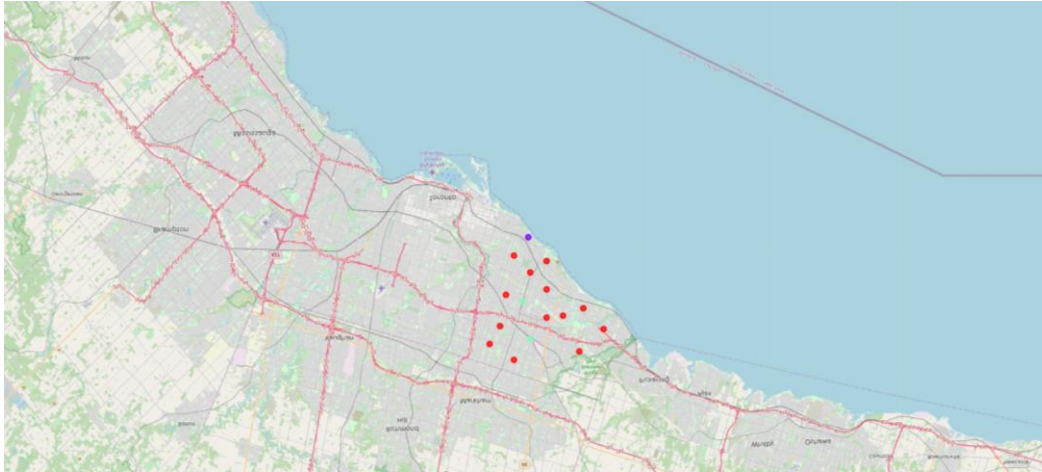


Map of Queens in New York City



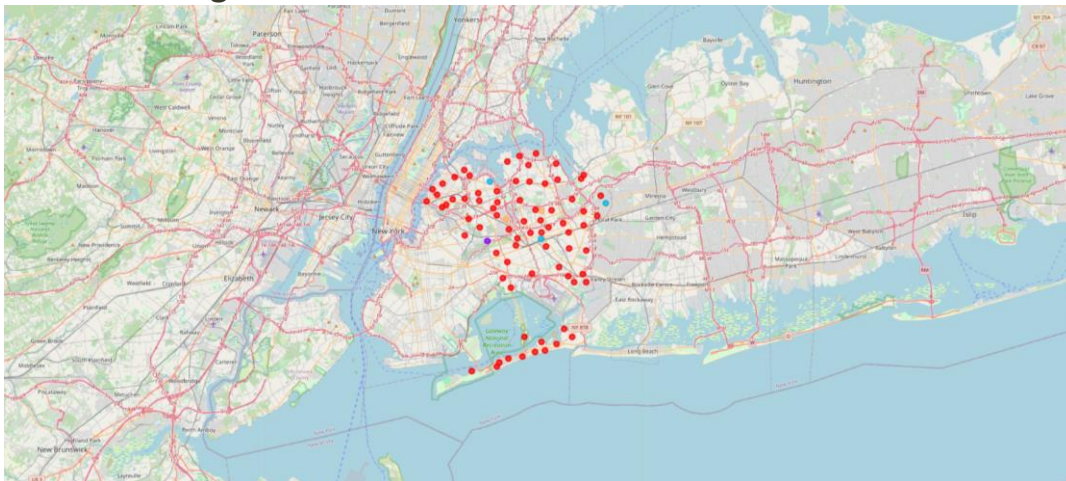
Map of Scarborough in Toronto

Different neighbourhood clusters



Map of Queens in New York City

Different neighbourhood clusters



Comparison between Neighbourhoods

Scarborough vs Queens

Scarborough has 86 distinct venues in 57 categories
The most common venues in Scarborough are coffee shops, international restaurants, and skating rinks
Queens has 1714 distinct venues in 273 categories
The most common venues in Queens are bodegas, bakeries, coffee shops, and parks.

Conclusion

Based on the quantity of venues and variety of venues, Queens is a better choice than Scarborough to relocate the headquarters of the Fortune 500 company. Queens offer a greater amount of gyms, grocery stores, restaurants for individual and families of the employees.