

Report

1. Introduction

Nowadays, more and more people move to big cities, because those cities are more diversified, more convenient, and there are more job opportunities. Before moving, people want to know the living environment, so as to decide where is more suitable for living when there are multiple choices. I will explore New York City and the city of Toronto and compare the neighborhoods of the two cities and determine how similar or dissimilar they are. These two cities are the financial capitals of the U.S. and Canada respectively. By comparing the two cities can reflect the characteristics of the two. Thus, it can provide background information and suggestions for people who want to move.

2. Data

The data contains postal code, boroughs, neighborhoods, latitude and longitude. First, we can load and explore the data, and then transform the data into a pandas data frame, which can give us a general idea about the data. Second, create plots to show the information about New York City and the city of Toronto. Third, analyze each neighborhood. Thus, we can know how similar each neighborhood is, and how similar or dissimilar the two cities are. Therefore, people can know which community is more suitable for them

Source of the data: https://cocl.us/new_york_dataset

https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M

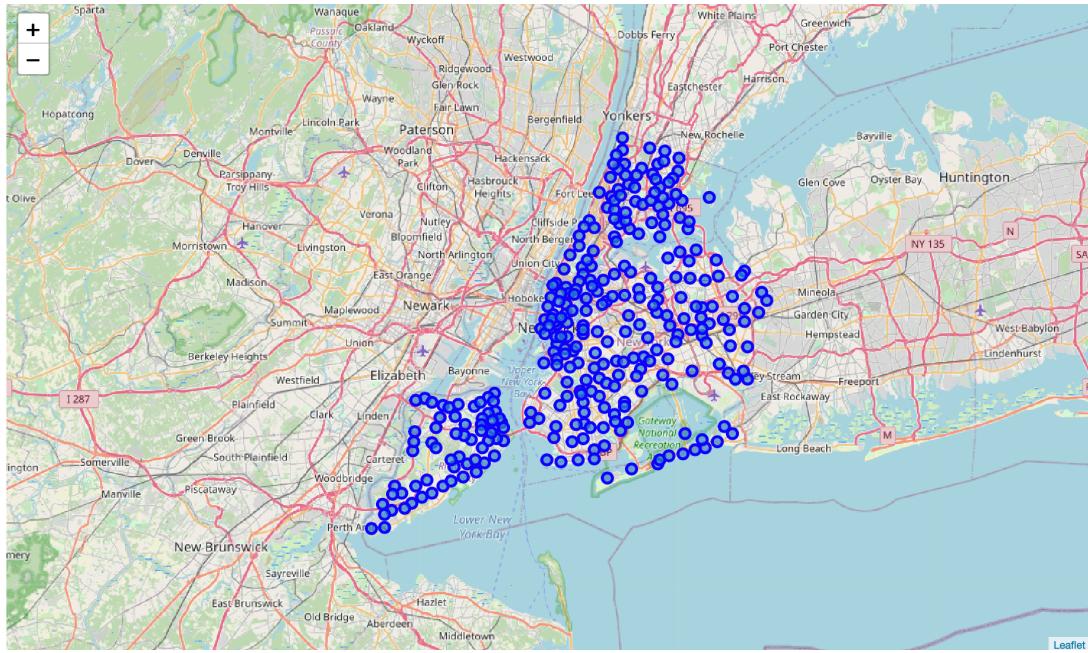
<https://data.cityofnewyork.us/api/views/2fra-mtpn/rows.csv?accessType=DOWNLOAD>

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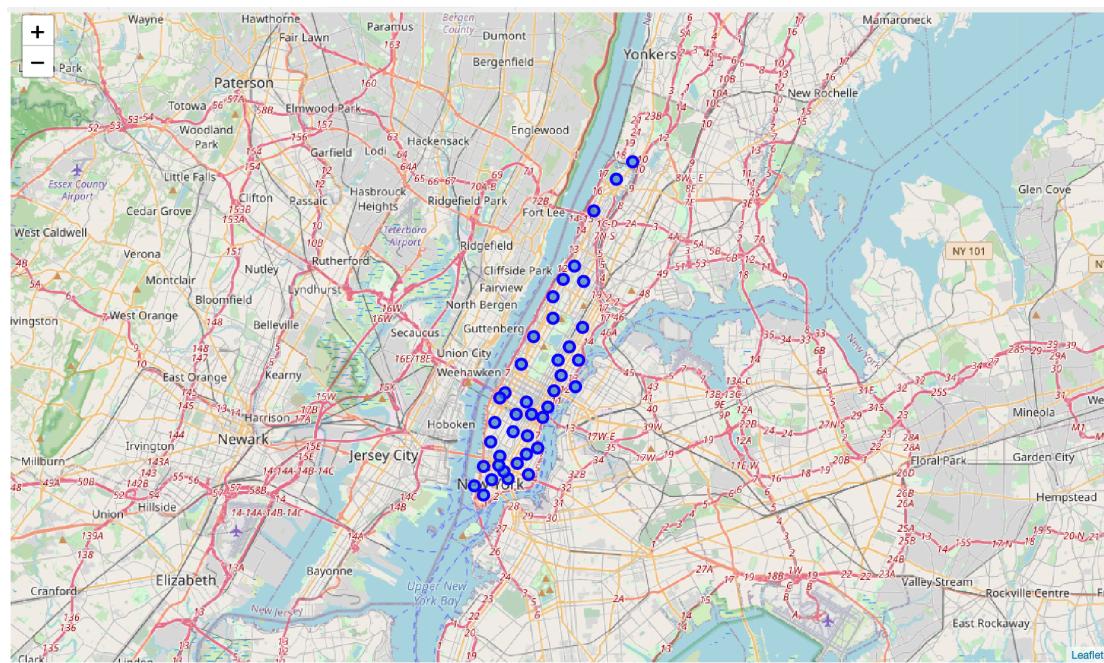
3. Methodology

3.1 New York

I analyzed the New York data, and created map of New York using latitude and longitude values.



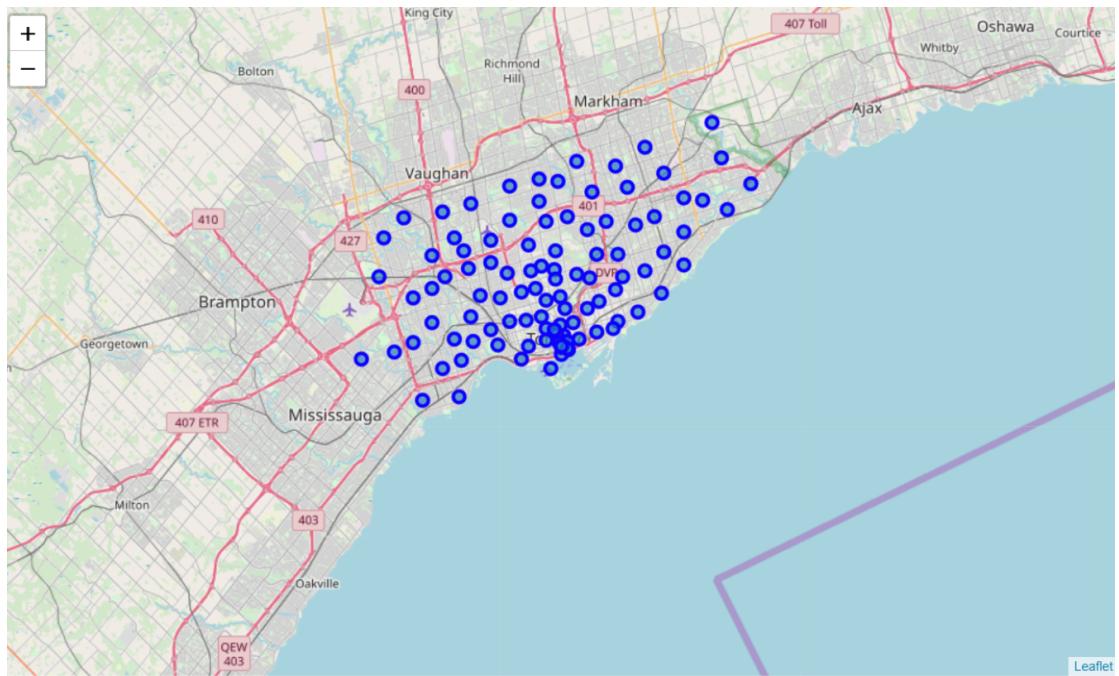
Then, I created map of Manhattan using latitude and longitude values.



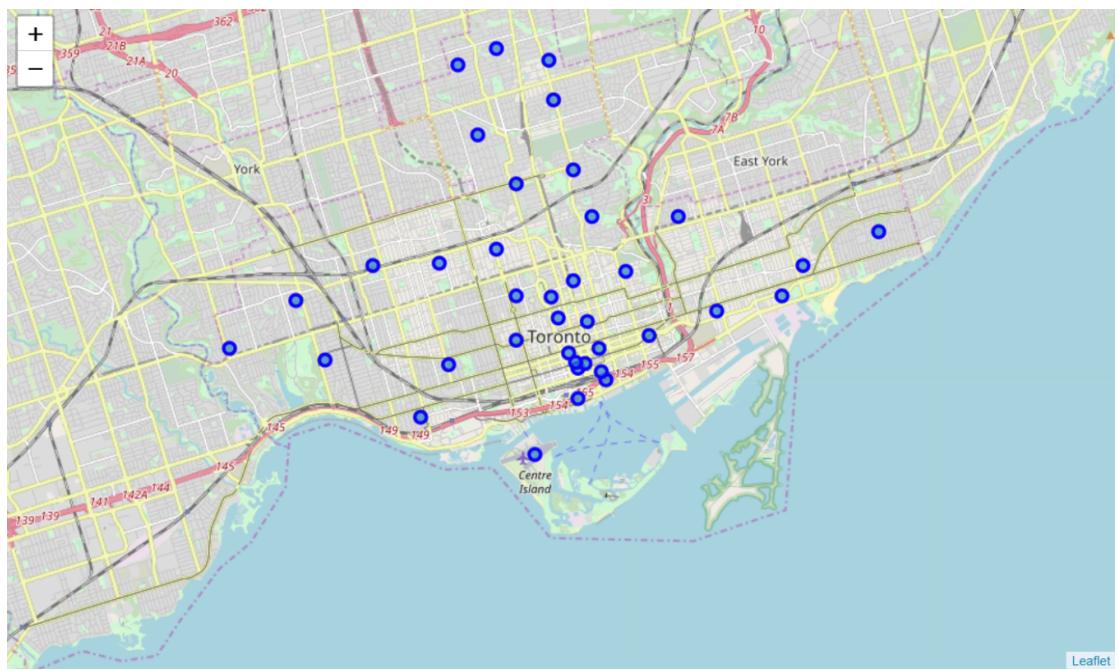
Then, I made calls to the Foursquare API, and constructed a URL to send a request to the API.

3.2 Toronto

I analyzed the Toronto data, and created map of Toronto using latitude and longitude values.



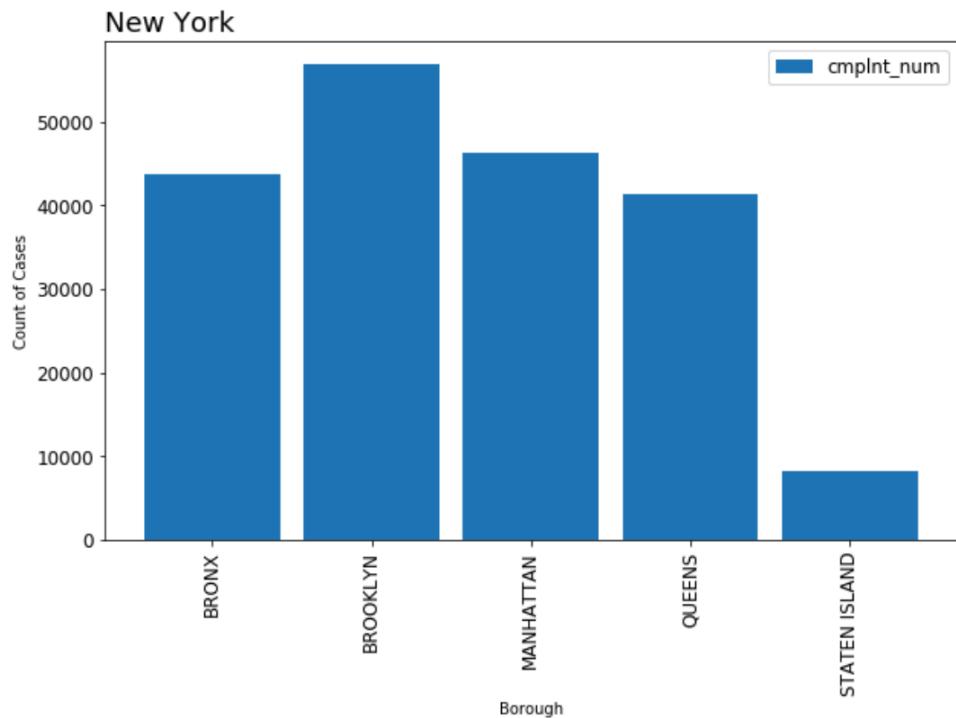
Then, I created map of East, Central, West, Downtown Toronto using latitude and longitude values.



Then, I made calls to the Foursquare API, and constructed a URL to send a request to the API.

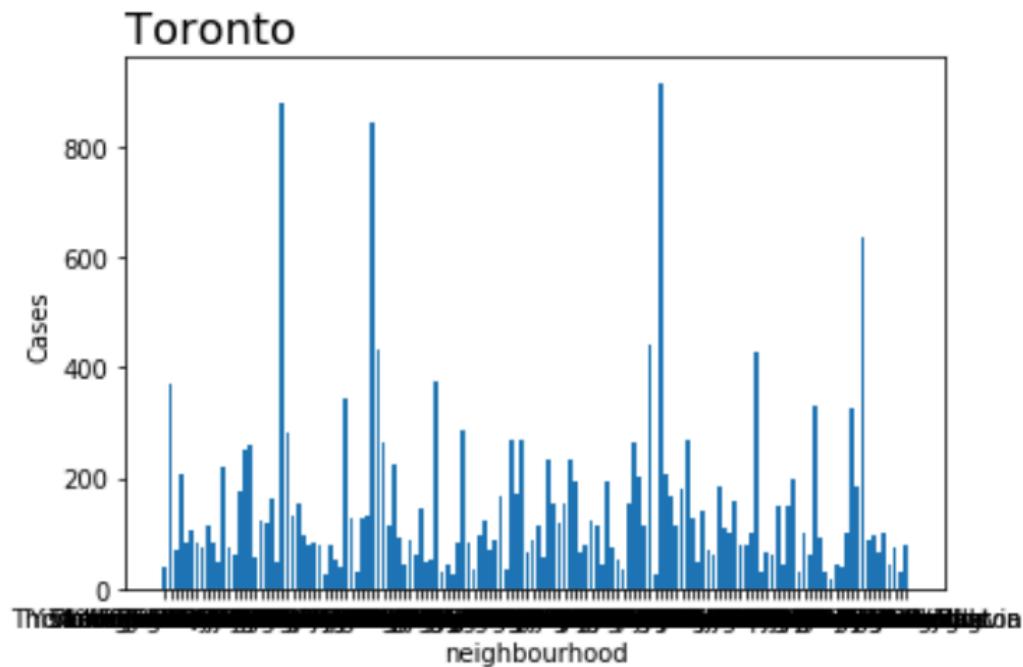
3.3 New York Crime Rate

I used New York Crime data to create a bar chart to show how many cases occurred in each region.



3.4 Toronto Crime rate

I used Toronto data to create a bar chart to show how many cases occurred in each region.



4. Results

New York and Toronto have different geographical locations and different climates,

but they are both coastal cities. In densely populated areas, the crime rate is higher.

5. Discussion

The graphs show where the boroughs are, so the people can easily find which location they are interested in. And, the bar chart shows the crime rate in different boroughs and neighborhoods so that they can know where is safer. So, it can give people some suggestions.

6. Conclusion

In this study, I analyzed and compared New York and Toronto very briefly, showing their geographic location and crime rate. If you want to understand these two cities, more research and analysis should be done.