Japanese Restaurants in New York City

Introduction

- New York City, city and port located at the mouth of the Hudson River, southeastern New York state, northeastern U.S. It is the largest and most influential American metropolis. New York City is in reality a collection of many neighborhoods scattered among the city's five boroughs—Manhattan, Brooklyn, the Bronx, Queens, and Staten Island—each exhibiting its own lifestyle.

- This project deals with answering the question 'where should person 'X' open a new Japanese restaurant?' and 'where should person 'Y' go to have the best Japanese food?'.

Data

- For this Business Problem we shall collect the neighborhood, borough, latitude and longitude, restaurant names, restaurant ratings and tips data of New York City. The data on the neighborhood, boroughs shall be collected from : https://cocl.us/new_york_dataset.

- The restaurant details shall be collected by using FourSquare API via the request library in Python.

	Borough	Neighborhood	Latitude	Longitude
0	Bronx	Wakefield	40.894705	-73.847201
1	Bronx	Co-op City	40.874294	-73.829939
2	Bronx	Eastchester	40.887556	-73.827806
3	Bronx	Fieldston	40.895437	-73.905643
4	Bronx	Riverdale	40.890834	-73.912585

FOURSQUARE

Methodology

- Data will be collected from https://cocl.us/new_york_dataset and cleaned and processed into a dataframe.

	Borough	Neighborhood	Latitude	Longitude
0	Staten Island	St. George	40.644982	-74.079353
1	Staten Island	New Brighton	40.640615	-74.087017
2	Staten Island	Stapleton	40.626928	-74.077902
3	Staten Island	Rosebank	40.615305	-74.069805
4	Staten Island	West Brighton	40.631879	-74.107182

- . FourSquare be used to locate all venues and then filtered by Japanese restaurants in each borough for comparison purposes.

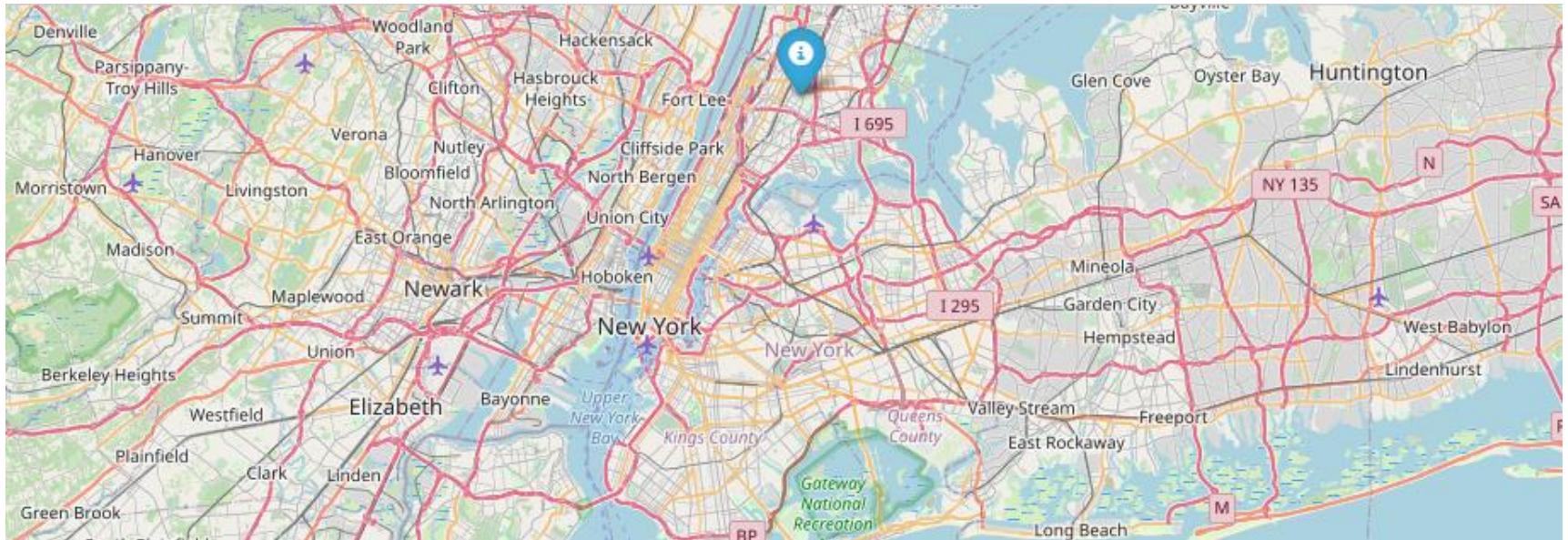|	Neighbourhood	Neighbourhood Latitude	Neighbourhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category	Venue Category Id	Venue Id
0	St. George	40.644982	-74.079353	A&S Pizzeria	40.643940	-74.077626	Pizza Place	4bf58dd8d48988d1ca941735	4bb6924c46d4a5938e7ac6c0
1	St. George	40.644982	-74.079353	Beso	40.643306	-74.076508	Tapas Restaurant	4bf58dd8d48988d1db931735	4a214841f964a520cd7c1fe3
2	St. George	40.644982	-74.079353	Staten Island September 11 Memorial	40.646767	-74.076510	Monument / Landmark	4bf58dd8d48988d12d941735	4bf9c5c08d30d13a6bce0218
3	St. George	40.644982	-74.079353	Richmond County Bank Ballpark	40.645056	-74.076864	Baseball Stadium	4bf58dd8d48988d18c941735	4e62c75a483bd9a9747d8cd8
4	St. George	40.644982	-74.079353	Shake Shack	40.643660	-74.075891	Burger Joint	4bf58dd8d48988d16c941735	5df19589ecb0ba00082b90d3

- Ratings by users will be analysed. Data will be sorted based on rankings.

We shall obtain the rating for each Japanese restaurant using Foursquare. There might be some restaurant with no ratings.

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The place has not been reviewed

[6.5, 6.8, 7.7, 7.9, 7.0]
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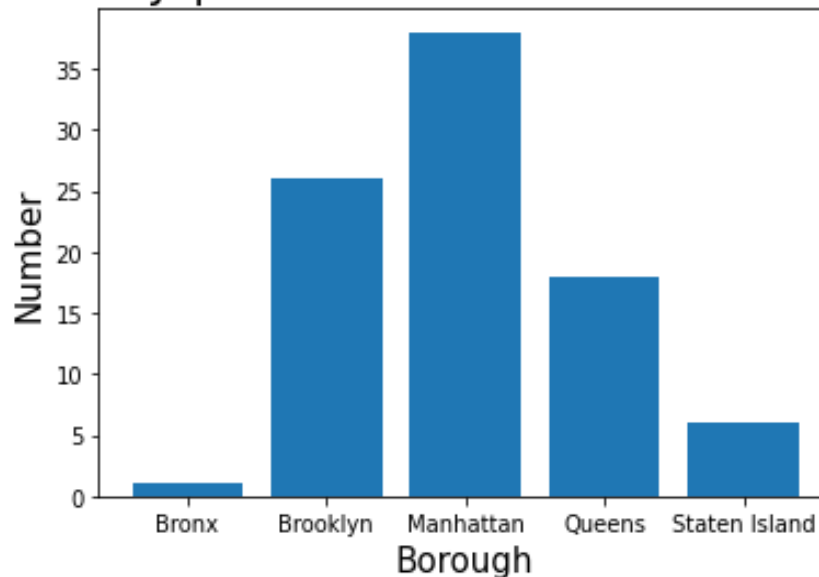- Also, Folium shall be used to see the location of the Japanese Restaurants.
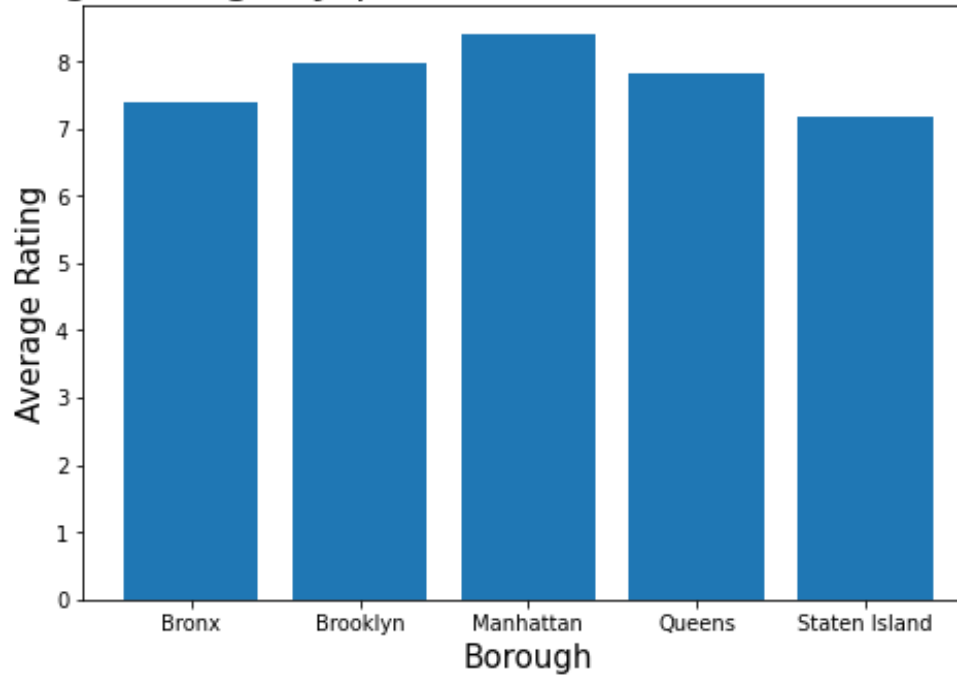
Bronx:

Results

- We can see that there are very few Japanese Restaurants located in each Borough of New York City, with the minimum number in Bronx and maximum in Manhattan.

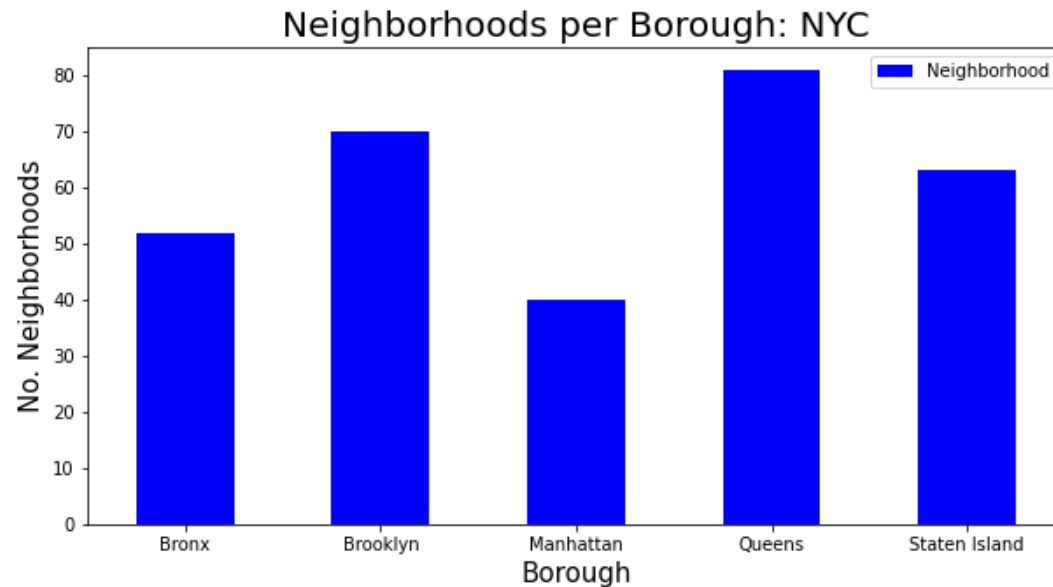

Number of Japanese Restaurants for each Borough

- Whereas the average rating of Manhattan is the highest.

Average rating of Japanese Resturants for each Borough

- We had also seen that Queens had the maximum number of neighbourhoods followed by Brooklyn.

Neighborhoods per Borough: NYC

Discussion

- On looking at the results obtained we can see that Manhattan and Brooklyn would be the best places to open a new restaurant since both these places satisfy the criteria. I would personally prefer Brooklyn since there are more number of neighbourhoods in Brooklyn and less number of Japanese Restaurants than Manhattan, making the market less competitive. Also, the real estate prices in Brooklyn will be much cheaper so my new restaurant would be more profitable.

- But for a visitor he would prefer Manhattan because of the large number of options available and also the good ratings.

Conclusion

- In the project we have gone through understanding the problem and exploring and filtering data accordingly. If person 'X' has to open a new restaurant then he will likely prefer Brooklyn. Whereas a person who wants to eat good Japanese food will go to Manhattan.

- Though the ultimate decision will depend upon the requirements of the two. This project will help both of them to look at the results and according to their needs choose the location.