

Final Project Capstone - Report

Chinese Restaurants in New York

1.Introduction

New York is one of the largest city in the North America and the most populated city in the United States. New York City is a metropolitan area with more than 8 million people , having also the largest Chinese population (around 1 million people) of any city outside of Asia and within the USA. With more than 2000 chinese restaurants in New York City ,the competition is very high. The chinese cuisine is on top food interests in New York not only for residents but also for tourists. This final project will try to answer to the next questions: -Which neighborhoods have the best chinese restaurants? -Which is the best chinese restaurant in New York(Tips,Likes,Rating)? -Which areas are best for living if one prefers chinese cuisine?

2.Data

The data used for this project is gathered from different sources:

- an unprocessed New York data was downloaded in JSON data format:https://cocl.us/new_york_dataset containing neighborhoods and boroughs, latitudes, and longitudes;
- Foursquare API as location data provider, used to retrieve data about chinese restaurants in different neighborhoods, ratings, tips: <https://developer.foursquare.com/docs>

3.Methodology

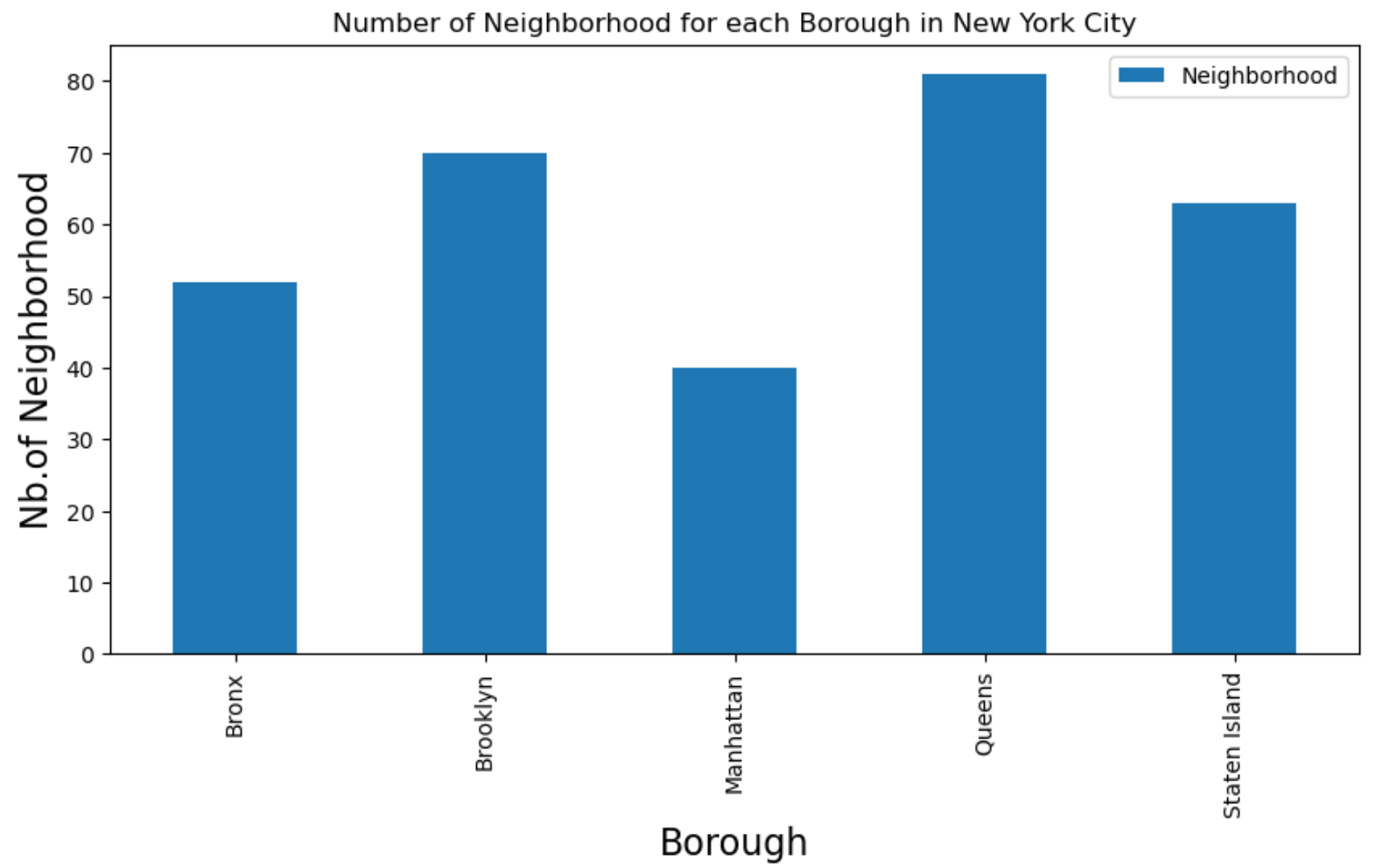
In [5]: We followed the next steps:

```
1.Import New York City Data containing list of Boroughs,Neighbourhoods along with their latitude and longitude from https://cocl.us/new_york_dataset.
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Out[5]:

	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

In [6]: Plot the Number of Neighborhoods per Borough in New York



2.Based on latitude and longitude, we are searching for restaurants for each Neighborhood via Foursquare API.

In [11]: 3.Filter out only Chinese Restaurants.

Out[11]:

	Borough	Neighborhood	ID	Name
0	Bronx	Eastchester	4dabc3dc93a04642f09ccabd	Xing Lung Chinese Restaurant
1	Bronx	Norwood	4e41d2c4b61ca5ba3b1f9c6b	Ming Liang Kitchen
2	Bronx	Norwood	4ce313fc438b224bbc6c80a3	Happy Dragon
3	Bronx	Pelham Parkway	4b9d6b45f964a52078ab36e3	Mr. Q's Chinese Restaurant
4	Bronx	Bedford Park	4e4d0387bd413c4cc66dfd72	Hung Hing Chinese Restaurant

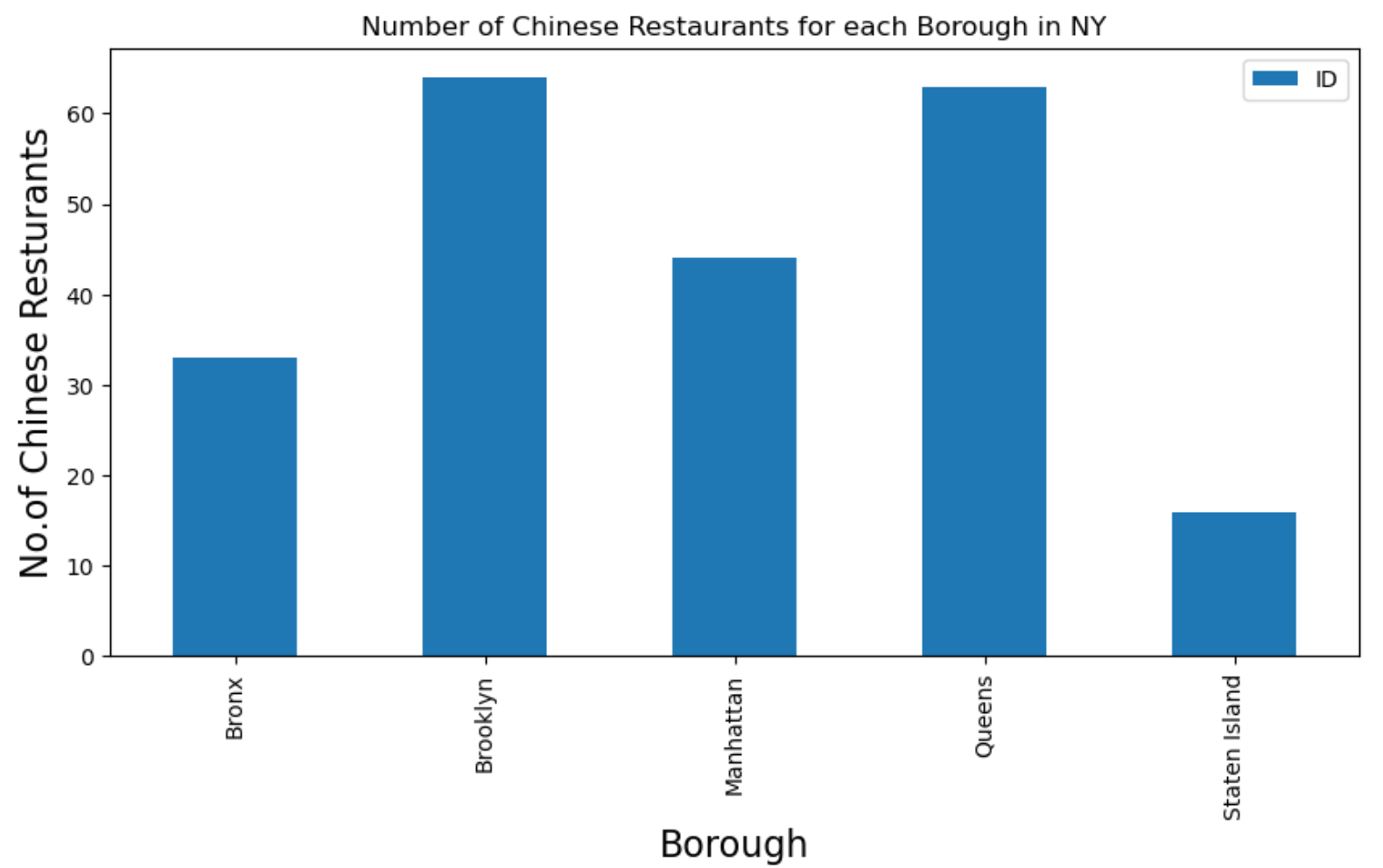
The number of chinese restaurants is 220 in New York City for a radius of 500

In [18]: 4. Next we retrieve information - Ratings, Likes, Tips for each Chinise Restaurant, again by using Foursquare API.

Out[18]:

	Borough	Neighborhood	ID	Name	Likes	Rating	Tips
0	Bronx	Eastchester	4dabc3dc93a04642f09ccabd	Xing Lung Chinese Restaurant	6	6.7	0
1	Bronx	Norwood	0	0	0	0.0	0
2	Bronx	Norwood	0	0	0	0.0	0
3	Bronx	Pelham Parkway	4b9d6b45f964a52078ab36e3	Mr. Q's Chinese Restaurant	10	7.6	10
4	Bronx	Bedford Park	4e4d0387bd413c4cc66dfd72	Hung Hing Chinese Restaurant	5	6.4	2

In [25]: 5. Perform analysis on the data obtained.



In [22]:



In [44]: We found the Chinese restaurants with Maximum Likes.

Out[44]:

Borough	Manhattan
Neighborhood	Chelsea
ID	44e9b421f964a520a5371fe3
Name	Buddakan
Likes	1491
Rating	9.2
Tips	522
Name:	62, dtype: object

In [45]: We found the Chinese restaurants with Maximum Tips.

Out[45]:

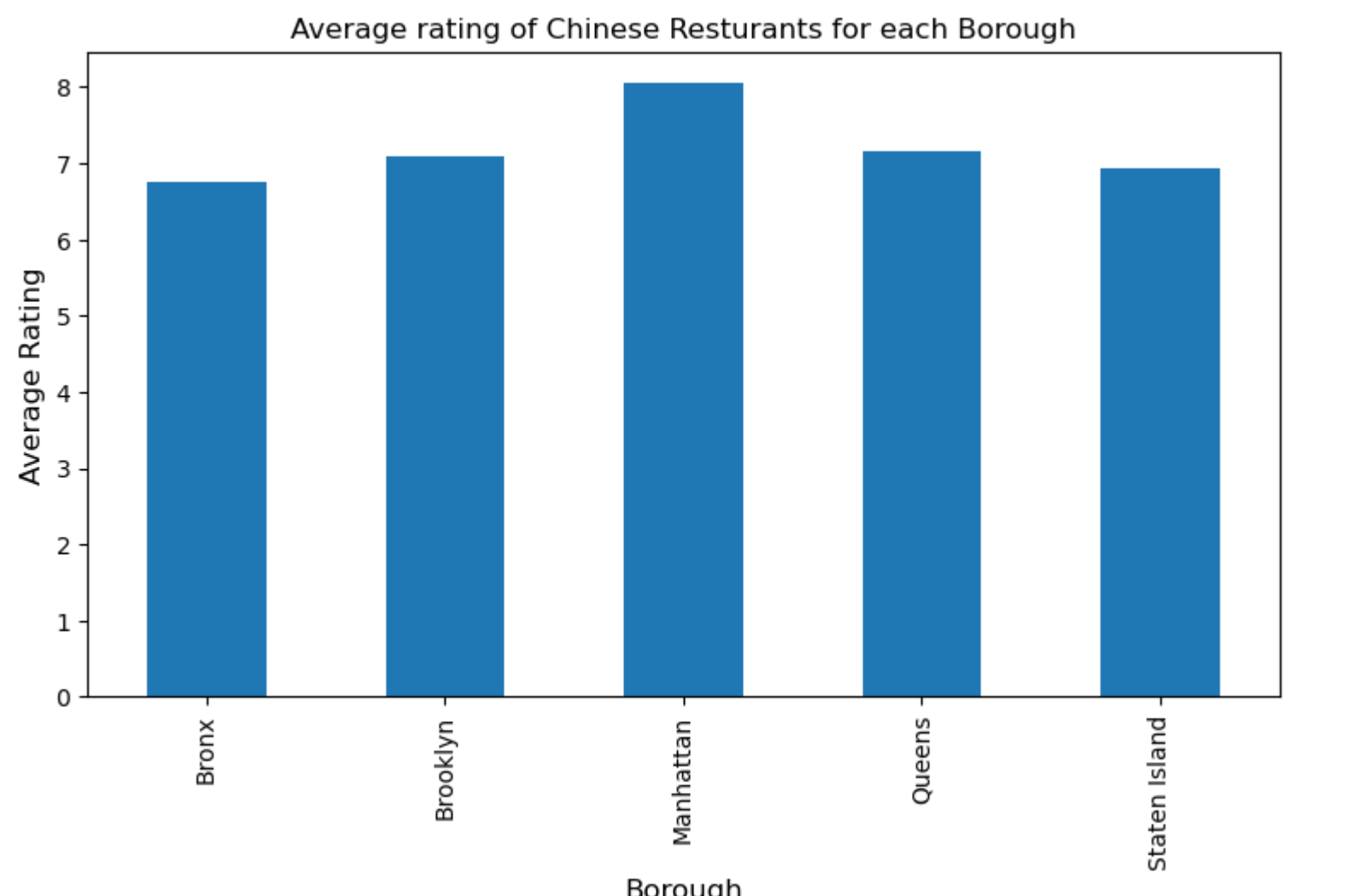
Borough	Manhattan
Neighborhood	Chelsea
ID	44e9b421f964a520a5371fe3
Name	Buddakan
Likes	1491
Rating	9.2
Tips	522
Name:	62, dtype: object

In [51]: We found the Chinese restaurants with Maximum Ratings

Out[51]:

Borough	Manhattan
Neighborhood	Chelsea
ID	44e9b421f964a520a5371fe3
Name	Buddakan
Likes	1491
Rating	9.2
Tips	522
Name:	62, dtype: object

In [57]: Calculating Average Rating for each Borough



Results

We've finished with the analysis and we came up to these conclusions:

- Which neighborhoods have the best chinese restaurants? Chelsea,Flatiron, East Village are some of the best Neighborhoods with Chinese Restaurants
- The best chinese restaurant in New York : Buddakan- Chelsea- Manhattan (Rating-9.2), (Likes-1491),(Likes-1491),(Tips-522).
- Which areas are best for living if one prefers chinese cuisine? - Manhattan is the suitable place to stay if one prefers Chinese cuisine since the average rating of Restaurants in Manhattan is the highest (8.0).

Conclusion

In this project I performed an analysis on Chinese Restaurants in New York City with the help of visualizations such as bar graphs and maps using Foursquare API in this way I discovered some useful information from the data.