

INTRODUCTION

In the Battle of the Neighborhoods final project, we are tasked to leverage the Foursquare location data to compare neighborhoods of our choice. In my case, I will be using Foursquare location data of Italian restaurants throughout the New York City boroughs (and the neighborhoods within each borough). This information is used to answer the question: if someone is looking to open an Italian restaurant in New York City, where would I recommend that they open it?

I come from a long line of Italian restaurateurs, many of whom immigrated to New York City back in the early 20th century. While I will not go into the family business, I have siblings that are ready to start their own culinary careers. Hopefully with this project, I will be able to help find the best location for them to set up shop. New York City has the largest population of Italian Americans in all of North America, so there will be a lot of competition. I will try and find a borough, and more specifically, a neighborhood that has the best average rating, but is not situated in an area that is already heavily saturated with other Italian restaurants.

DATA

I will be using data from the following links to help answer the question proposed above:

-https://cocl.us/new_york_dataset - data about the New York City boroughs and neighborhoods, as well as their longitudes and latitudes, and the restaurants and their ratings.

-<https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm> - data about the New York City neighborhood boundaries.

-Foursquare API - data about the locations of the Italian restaurants in New York City.

METHODOLOGY

-Import all of the data from the links above

-Find the number of neighborhoods in each New York City borough (this also shows all of the NYC boroughs)

-Find the number of Italian restaurants in each New York City borough

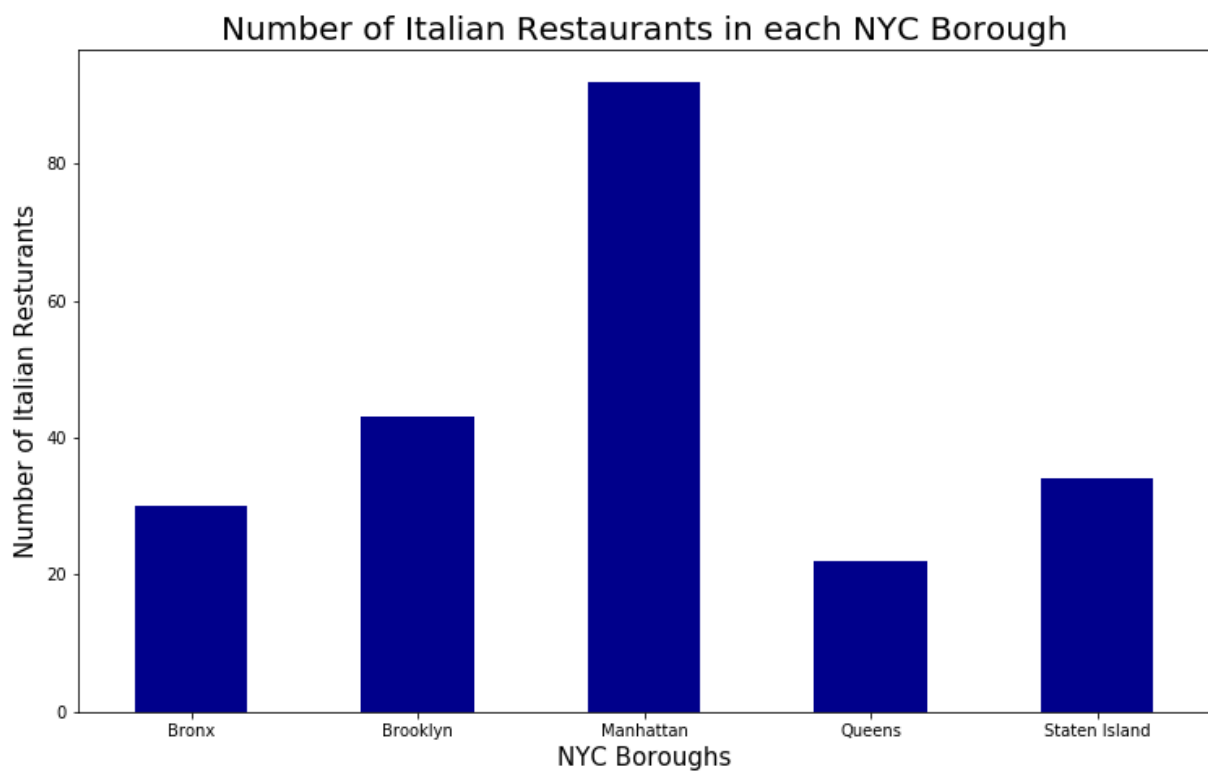
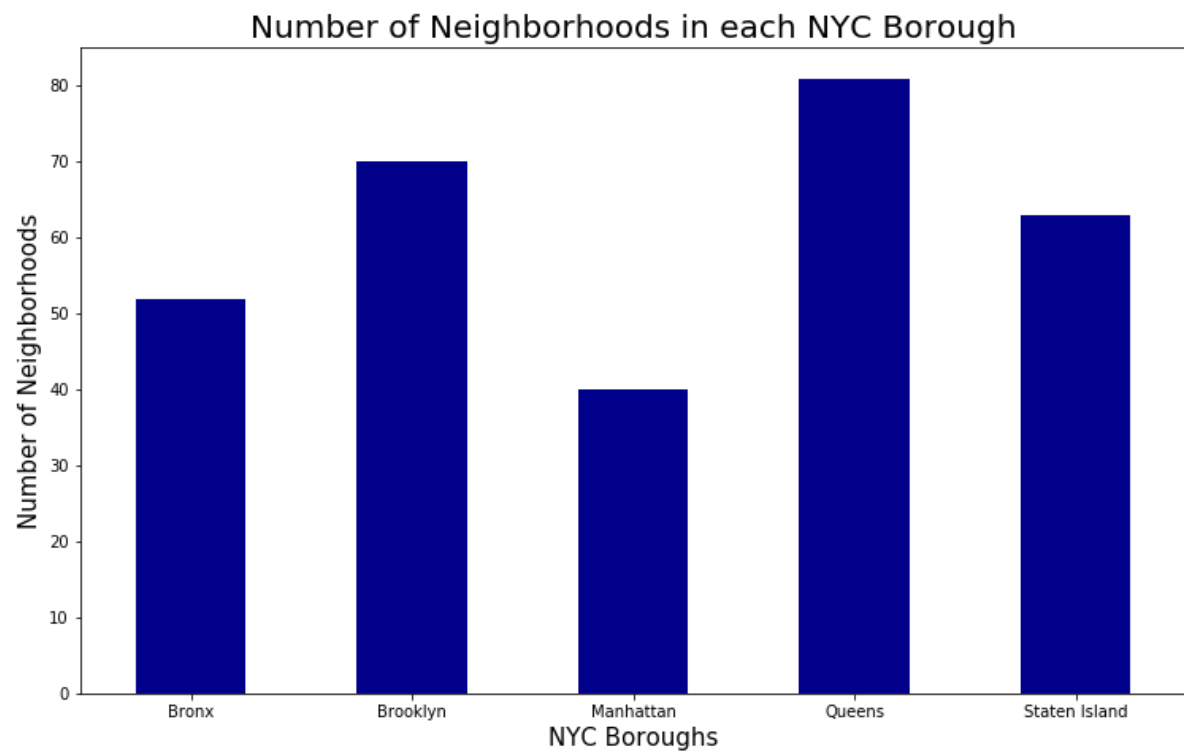
-Find the number of Italian restaurants in each New York City neighborhood

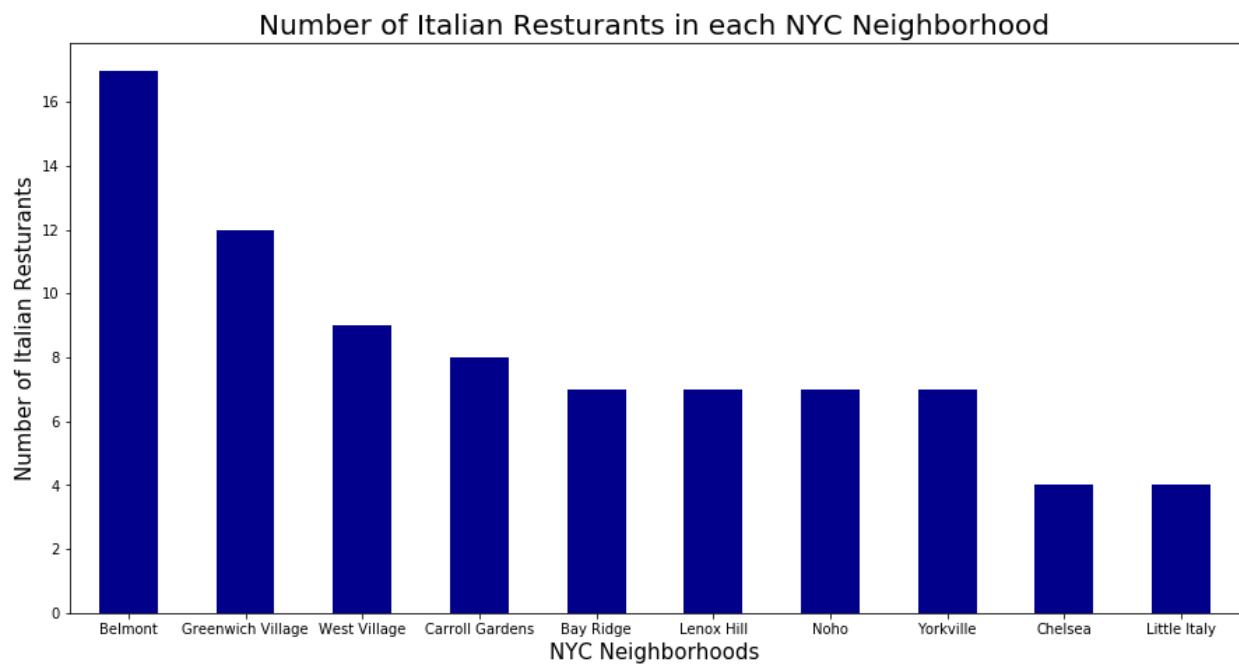
-Find the average rating of Italian restaurants in each New York City borough

-Find the average rating of Italian restaurants in each New York City neighborhood

-Make a conclusion based off of the results

RESULTS





	Neighborhood	Average Rating
86	Tribeca	9.200000
11	Boerum Hill	9.200000
12	Bushwick	9.200000
44	Hamilton Heights	9.000000
37	Fulton Ferry	8.900000
54	Lower East Side	8.900000
28	Dumbo	8.900000
64	Noho	8.766667
43	Greenwich Village	8.707143
80	Soho	8.700000

	Borough	Average Rating
2	Manhattan	8.336364
0	Bronx	7.817241
1	Brooklyn	7.365957
3	Queens	7.021739
4	Staten Island	4.905882

Although Manhattan has the least number of neighborhoods out of all the New York City boroughs, it has almost a third of the Italian American population in New York City (almost 1 million!), making it incredibly populated with Italians and a good choice for an Italian restaurant. To support Manhattan as the optimal borough, it has the highest number of Italian restaurants, making it a widely known area for Italian food, which will help attract more potential customers. It also has the highest average rating out of all New York City boroughs. 6 out of the top 10 highest average rating neighborhoods with Italian restaurants are in Manhattan. However, only Noho and Greenwich Village have more than one or two restaurants, 6 and 12, respectively. The other neighborhoods are not as well known for their Italian food, which may prevent potential customers. Note, since there will be a lot of competition due to there being so many highly rated Italian restaurants in Manhattan, it would be best to choose a neighborhood within Manhattan that does not have too many (or too few) other pre-existing Italian restaurants, but still maintains a good average rating. This leaves Noho as the only suitable choice.

To see my code, refer to the link in my submission that takes you to my Notebook on my Github repository. Some of the code (particularly the ones pulling from Foursquare) had its quota exceeded. I am unable to showcase all of the output at once. All of the code is still there, but you can refer to my presentation to see what the output produces.

DISCUSSION & CONCLUSION

After the analysis of all the data, I have come to the conclusion that Noho is the best neighborhood within Manhattan to start an Italian restaurant. It has 6 pre-existing Italian restaurants, which is not too high and not too low - there will still be competition, but not enough to prevent business and enough so that will attract new potential customers. Noho also has an average rating of 8.76/10. This is the the fourth highest overall average rating out of any neighborhood in New York City. Of course, this conclusion is based upon the accuracy of the data provided by the sources that I used. Also, if the data was obtained from other sources, the results may vary. However, based upon this report from the data that I used, I will let my siblings know of my findings.