

# ***Analyzing where to open a new Italian Restaurant in NY***

*Miriam Gimeno, May 23, 2021*

## **1. Introduction.**

New York City's demographics show that it is a large and ethnically diverse metropolis. It is the largest city in the United States with a long history of international immigration. New York City was home to over 8.3 million people in 2019, accounting for over 40% of the population of New York State and a slightly lower percentage of the New York metropolitan area, home to approximately 23.6 million.

This final project explores the best locations for an Italian restaurant through the city of New York. As per the current situation that all of us are living with the COVID-19, maybe is a bit risky to invest and open a new restaurant, for this reason my client wants to know how many Italian restaurants there are today and analyze if it would be a good decision, but as New York is the most diverse city in the world (800 languages are spoken in New York), it has a long tradition of different ethnical restaurants.

Opening a new restaurant requires serious considerations and is more complicated than it seems from the first glance. In particular, the location of the restaurant is one of the most important factors that will affect whether it will have success or a failure. So our project will attempt to answer the questions "Where should the investor open a Japanese Restaurant?" and "Where should I go if I want great Japanese food?".

## **2. Data.**

In order to answer the above questions, data on New York City neighborhoods, boroughs to include boundaries, latitude, longitude, restaurants, and restaurant ratings and tips are required.

New York City data containing the neighborhoods and boroughs, latitudes, and longitudes will be obtained from the data source: [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset)

All data related to locations will be obtained via the Foursquare API utilized via the Request library in Python.

## **3. Methodology.**

- Data will be collected from [https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset) and cleaned and processed into a data frame.
- Foursquare will be used to locate all venues and then filtered by Italian restaurant Ratings, tips, and likes by users will be counted and added to the data frame.
- Data will be sorted based on rankings.
- Finally, the data will be visually assessed using graphing from Python libraries.

## **4. Problem Statement.**

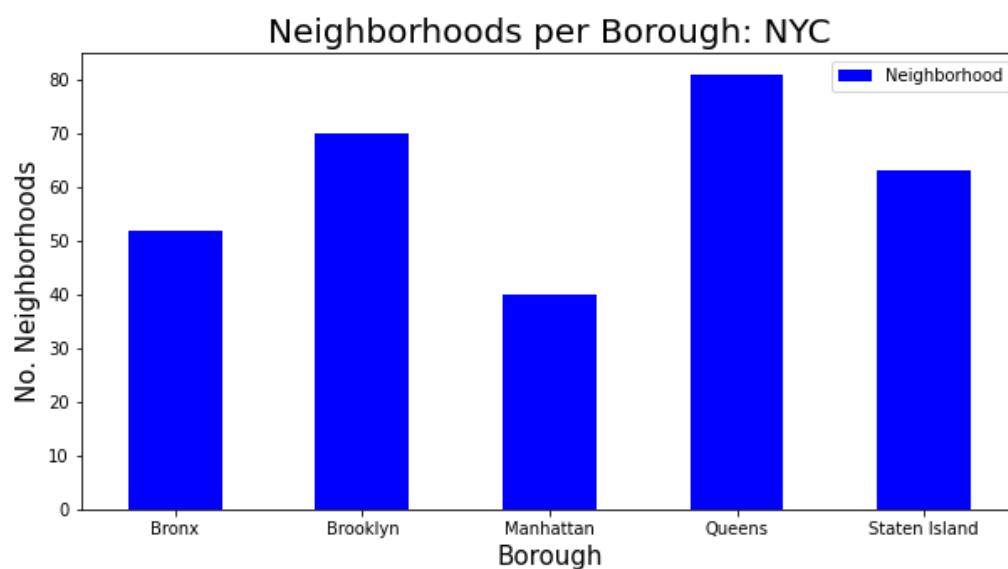
1. What is / are the best location(s) for Italian restaurant in New York City?
2. In what Neighborhood and/or borough should the investor open bike shop to have the best chance of being successful?
3. Where would I go in New York City for a best Italian restaurant?

## Initial NYC data

Getting our initial data where we can see the latitude and longitude of each borough and the neighborhood, in order to get an initial idea how the big is New York city and how many Italian restaurants there is.

|   | 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 |

According to the data we have obtained, in the following graph we can see that Queens is the district with the most neighborhoods in New York City, followed by Brooklyn, Staten Island and the Bronx, Manhattan would be the one with the fewest neighborhoods.



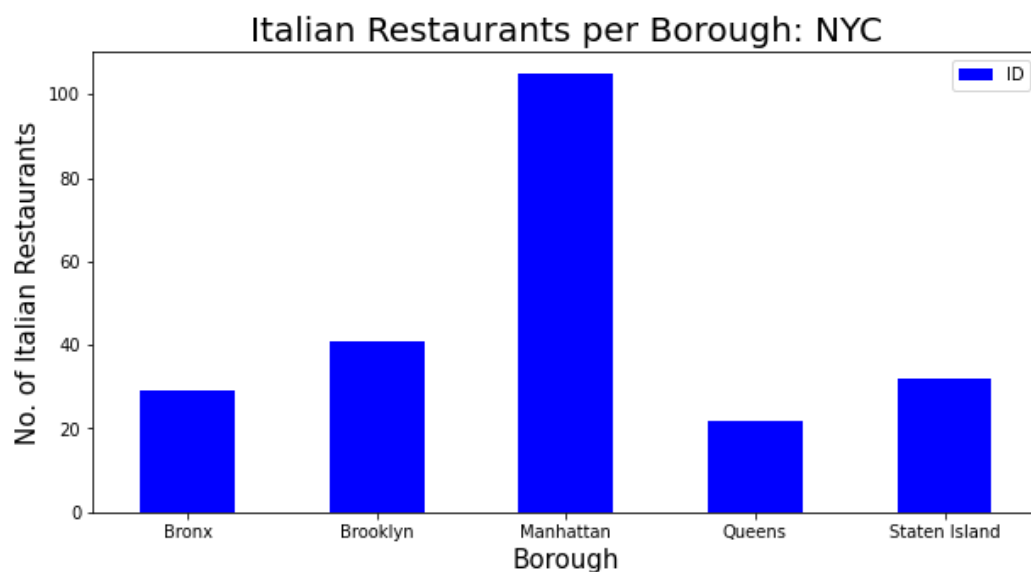
## Analyzing how many Italian restaurants there is in NYC.

We continue our analysis using Foursquare to locate all venues and know how many Italian restaurants are in total in NYC.

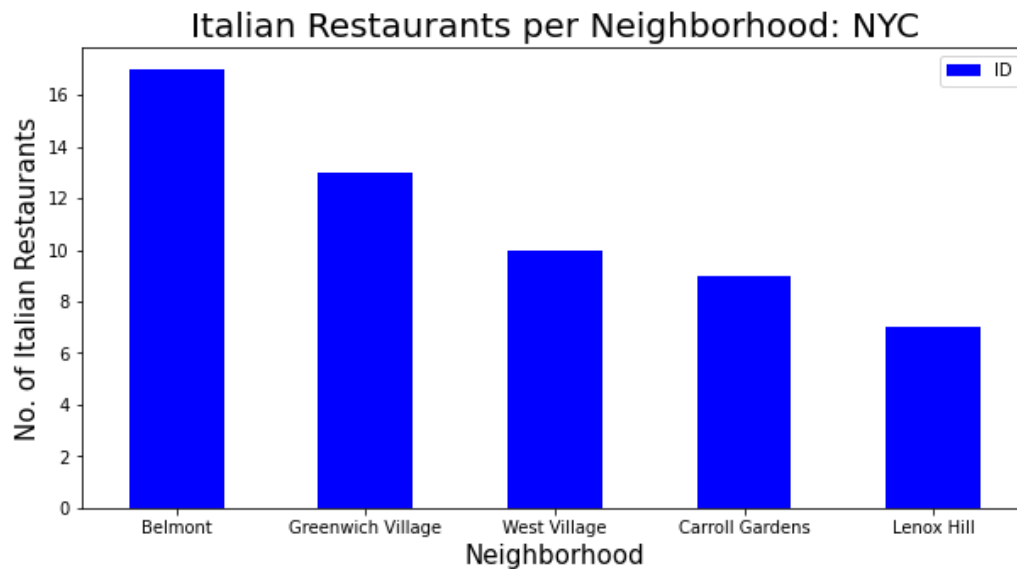
We obtained in total 229.

|     | Borough       | Neighborhood    | ID                       | Name                   |
|-----|---------------|-----------------|--------------------------|------------------------|
| 224 | Manhattan     | Flatiron        | 53370455498e18d7e6607a1d | La Pizza & La Pasta    |
| 225 | Manhattan     | Flatiron        | 4b741ab4f964a5202cc82de3 | Novità Cucina Creativa |
| 226 | Brooklyn      | Fulton Ferry    | 593c0d2262420b7feccc3048 | Cecconi's              |
| 227 | Brooklyn      | Dumbo           | 593c0d2262420b7feccc3048 | Cecconi's              |
| 228 | Staten Island | Lighthouse Hill | 5079ccdce4b065f1dd8155ad | Casa verde             |

After using the Foursquare request, we got the previous list with each Italian restaurant, where we can know in what borough and neighborhood is each one. According with the data we got, Manhattan is the borough with the highest number of Italian restaurants, data that make sense as it is the most tourist borough.



However, if we analysis the No. of Italian restaurants per neighborhood, we can see Belmont in the Bronx is where we can find more Italian restaurants, following below Greenwich Village.



Now is time to get the ranking of each restaurant using Foursquare request venue we processed only 50 out of 229 Italian restaurants due to the Foursquare limit.

With this analysis we obtained that Tinos's Delicatessen is the best Italian restaurant if you want to have a good Italian food.

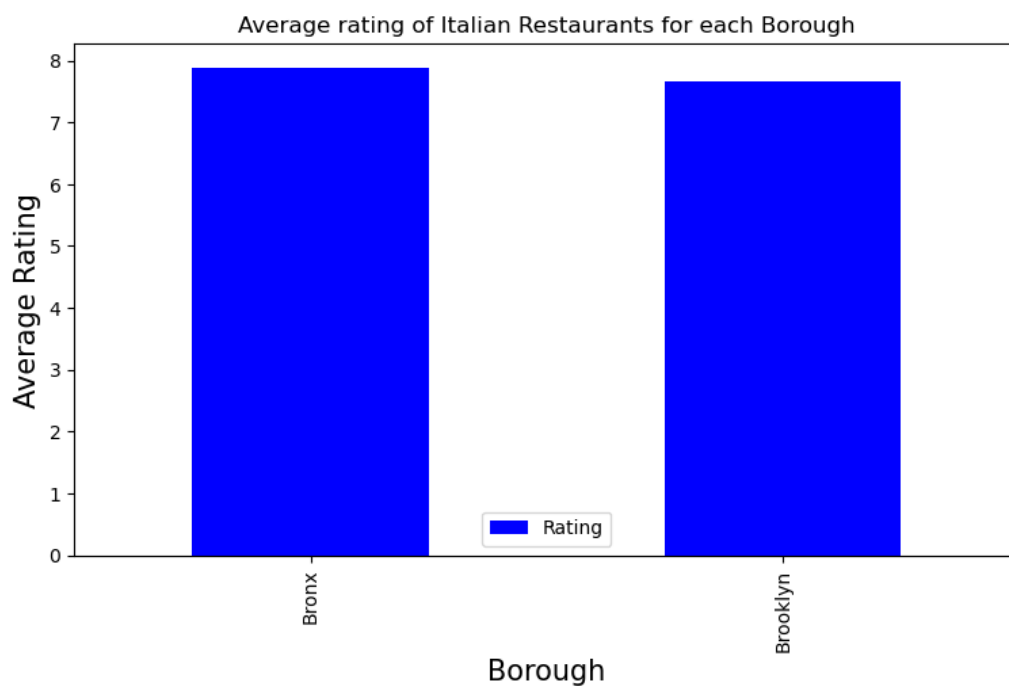
```
] : Borough      Bronx  
   Neighborhood  Belmont  
   ID            4acf80aef964a52025d420e3  
   Name          Tino's Delicatessen  
   Likes         147  
   Rating        9.3  
   Tips          48  
   Name: 6, dtype: object
```

## Identifying and visualizing neighborhood with the maximum average rating of restaurants.

Those are the top neighborhoods with the  
Highest average ratings of Italian Restaurants.

|   | Borough  | Average Rating |
|---|----------|----------------|
| 0 | Bronx    | 7.878571       |
| 1 | Brooklyn | 7.659091       |

|    | Neighborhood       | Average Rating |
|----|--------------------|----------------|
| 5  | Bushwick           | 9.200000       |
| 2  | Bedford Stuyvesant | 9.100000       |
| 8  | Cobble Hill        | 8.533333       |
| 19 | Woodlawn           | 8.400000       |
| 16 | Pelham Gardens     | 8.400000       |
| 13 | Morris Park        | 8.400000       |
| 7  | City Island        | 8.200000       |
| 3  | Belmont            | 8.029412       |
| 15 | Pelham Bay         | 7.900000       |
| 1  | Bedford Park       | 7.800000       |

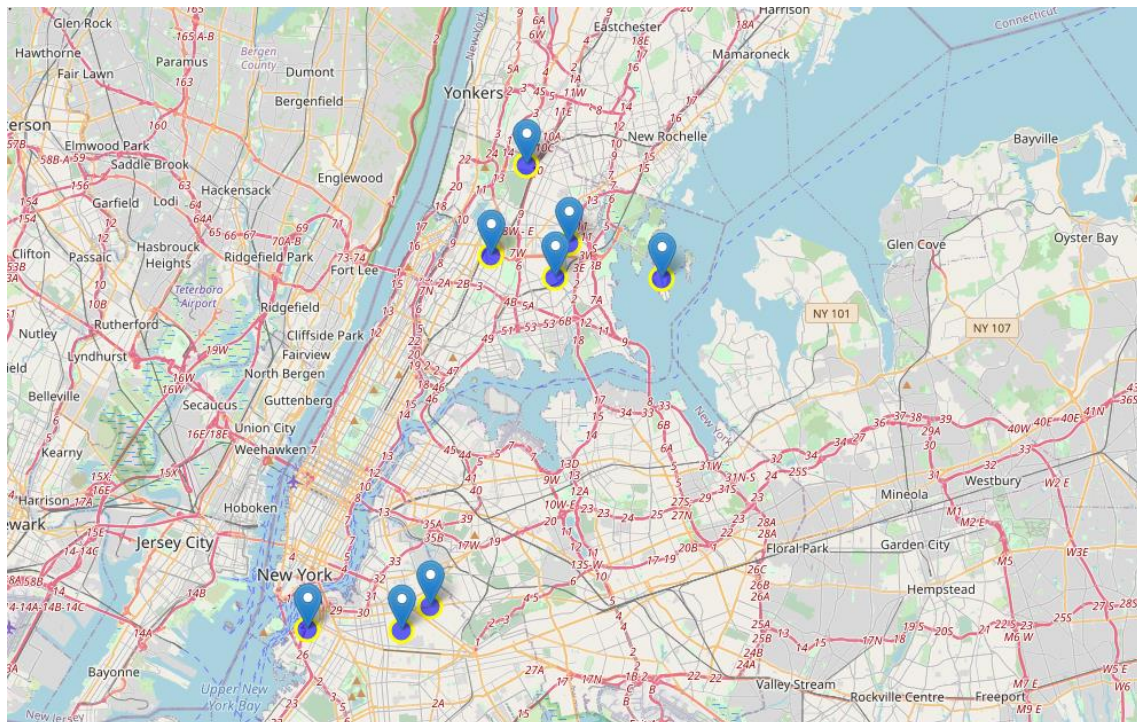


We will consider all the neighborhoods with average rating greater or equal 8.0 to visualize on a map.

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|   | Borough  | Neighborhood       | Latitude  | Longitude  | Average Rating |
|---|----------|--------------------|-----------|------------|----------------|
| 0 | Brooklyn | Bedford Stuyvesant | 40.687232 | -73.941785 | 9.100000       |
| 1 | Bronx    | Belmont            | 40.857277 | -73.888452 | 8.029412       |
| 2 | Brooklyn | Bushwick           | 40.698116 | -73.925258 | 9.200000       |
| 3 | Bronx    | City Island        | 40.847247 | -73.786488 | 8.200000       |
| 4 | Brooklyn | Cobble Hill        | 40.687920 | -73.998561 | 8.533333       |
| 5 | Bronx    | Morris Park        | 40.847549 | -73.850402 | 8.400000       |
| 6 | Bronx    | Pelham Gardens     | 40.862966 | -73.841612 | 8.400000       |
| 7 | Bronx    | Woodlawn           | 40.898273 | -73.867315 | 8.400000       |



## Results / Conclusion

On our initial data analysis, we can see that Queens has the biggest amount of neighborhoods, however we got a total of 229 Italian restaurants across the New York city and Manhattan is the borough with the highest number of Italian restaurants, but Belmont is the neighborhoods belonging to the borough of the Bronx with the largest number of Italian restaurants.

On the other hand, if you want to go to the best Italian restaurant, as per our analysis, Tinos's Delicatessen has the best Rating.

In conclusion, according to our analysis, I would suggest opening the Italian restaurant in the borough of Queens, since it has the largest number of neighborhoods and the least number of Italian restaurants, another option would be Brooklyn since it does not have a very high number of Italian restaurants, from my point of view it is a good location since it is a more touristy area.