

FINDING THE BEST LOCATION FOR A NEW MEXICAN RESTAURANT IN NEW YORK CITY

Introduction

New York City is the most populated city in the United States of America. It offers a wide range of options when it comes to food culture. One can find just about any type of food that the appetite demands. In this regard, Mexican food has been among the most popular over the years for many reasons which include proximity and population.

Problem

A group of investors are interested in creating a new Mexican restaurant that offers not just the authentic food but the authentic experience of Mexico's popular food culture.

Data Acquisition and Cleaning

Data Sources

Data about New York City's Boroughs, Neighborhoods and their GPS coordinates will be extracted from a government source in the following link:

https://cocl.us/new_york_dataset

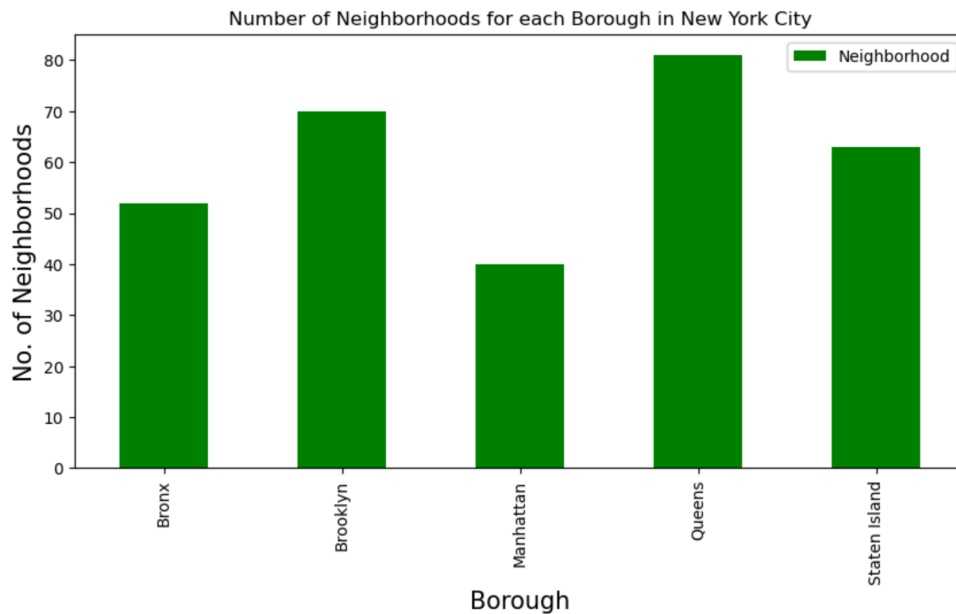
Foursquare will be used to find all the restaurants in the city.

Finally GeoSpace will be helpful to get New York's Boroughs boundaries.

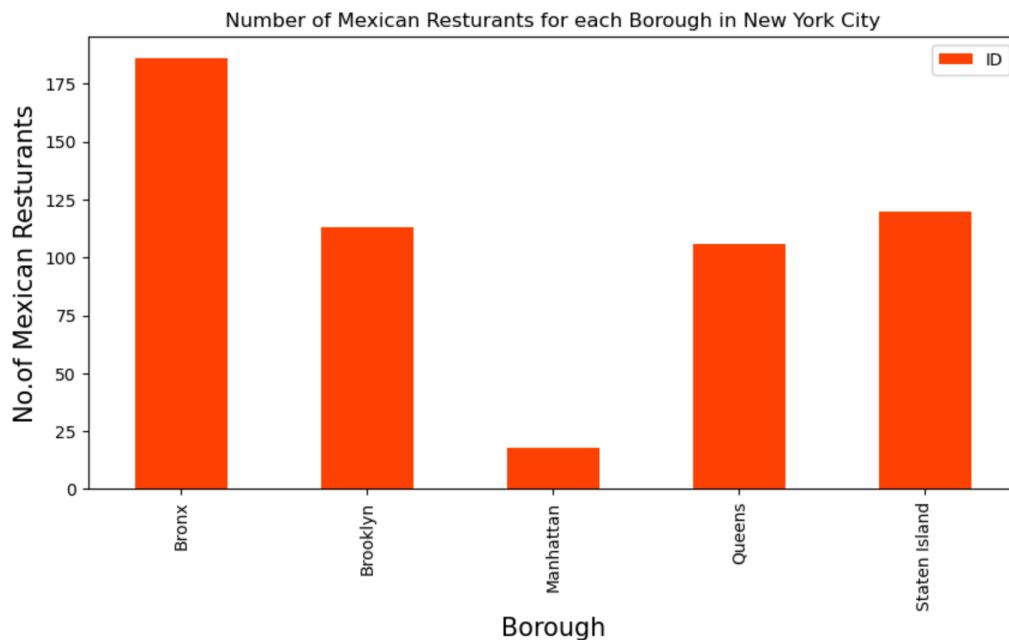
<https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm>

Exploratory Data Analysis

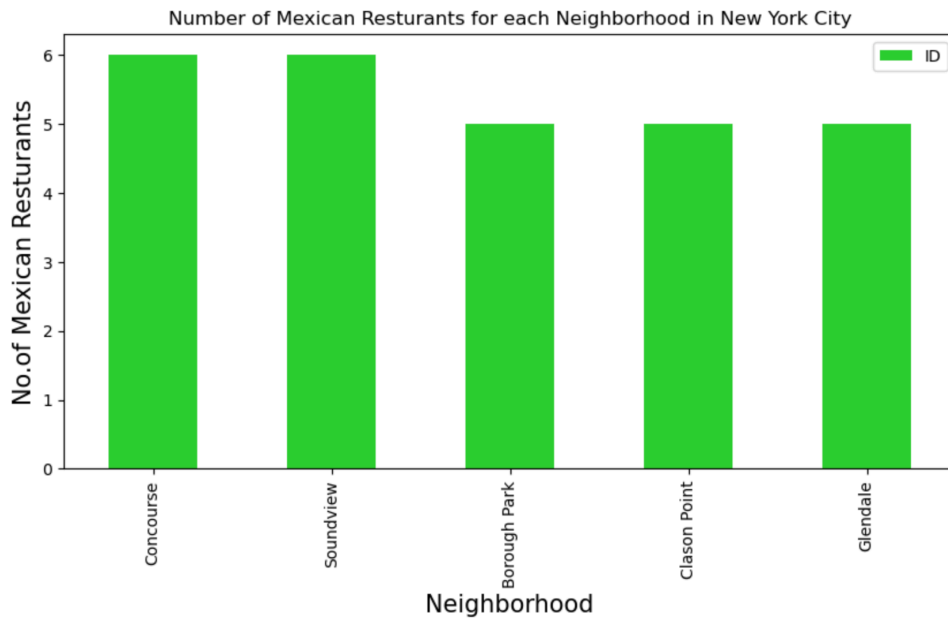
The first exploration reveal that Queens and Brooklyn have the highest number of neighborhoods as we can see in the following table.



Further analysis of the available borough's data show that the Bronx has the higher number of Mexican restaurants while Manhattan has the least. This is shown in the following chart:



Likewise, from the neighborhood data we can see that Concourse and Soundview have the highest number of restaurants:

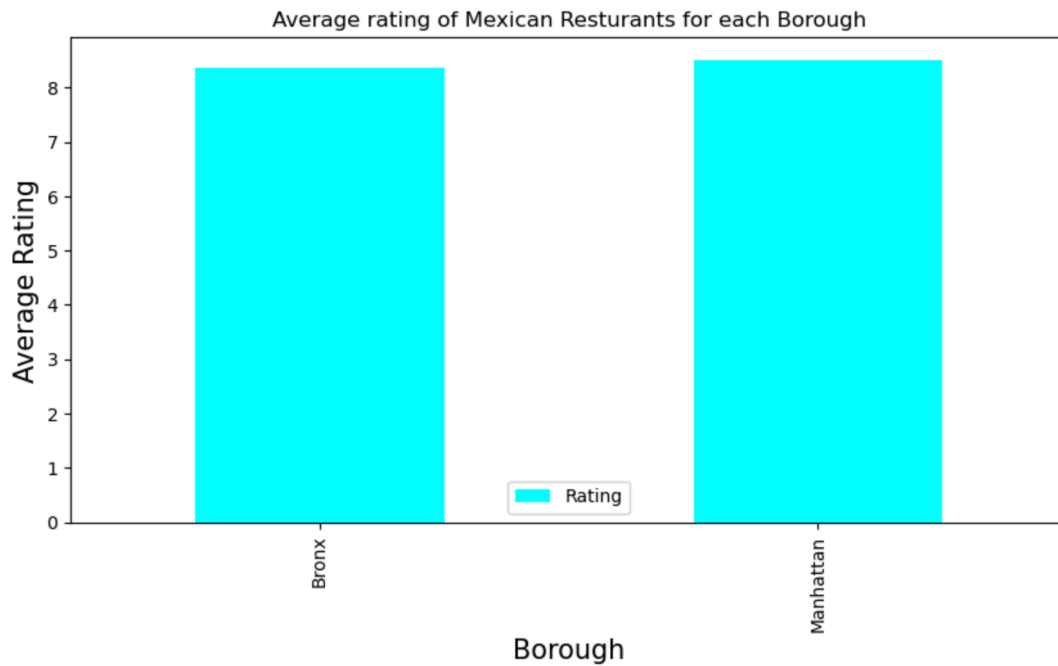


In the following tables we can see in detail each of the restaurants found in those two neighborhoods:

| | Borough | Neighborhood | ID | Name |
|----|---------|--------------|--------------------------|------------------------------|
| 83 | Bronx | Soundview | 4b4929d2f964a520656826e3 | Taqueria Tlaxcali |
| 84 | Bronx | Soundview | 55ef02ca498ecac7d983fd16 | Chipotle Mexican Grill |
| 85 | Bronx | Soundview | 4bf1b1ef3fa220a150991820 | Mexicocina |
| 86 | Bronx | Soundview | 53b89de7498e8be468fd777d | Cabo |
| 87 | Bronx | Soundview | 4c27e5e0fe6e2d7f4f84523c | Estrellita Poblana |
| 88 | Bronx | Soundview | 4b46a46ef964a5201d2626e3 | Xochimilco Family Restaurant |

| | Borough | Neighborhood | ID | Name |
|-----|---------|--------------|--------------------------|------------------------------|
| 152 | Bronx | Concourse | 4b46a46ef964a5201d2626e3 | Xochimilco Family Restaurant |
| 153 | Bronx | Concourse | 4bf1b1ef3fa220a150991820 | Mexicocina |
| 154 | Bronx | Concourse | 52267e8011d221c29c847ef6 | Grito Mexican Grill |
| 155 | Bronx | Concourse | 4c0952f0bbc676b0b30148d5 | La Morada |
| 156 | Bronx | Concourse | 4c55f79dfb5aa59325e6f07e | Taqueria San Pedro |
| 157 | Bronx | Concourse | 4c27e5e0fe6e2d7f4f84523c | Estrellita Poblana |

The analysis of the data about the best rated restaurants in New York we have found that there are only two boroughs that contain restaurants with rating above 8.0, as we can see in the following chart:



When looking for restaurants with rating values above 7 we can see that there only 16, as is shown in the following table:

| | Neighborhood | Average Rating |
|----|--------------------|----------------|
| 0 | Baychester | 8.400000 |
| 1 | Bedford Park | 8.500000 |
| 2 | City Island | 8.266667 |
| 3 | Co-op City | 8.075000 |
| 4 | Eastchester | 8.300000 |
| 5 | Fieldston | 8.225000 |
| 6 | Kingsbridge | 8.225000 |
| 7 | Marble Hill | 8.500000 |
| 8 | Morris Heights | 8.533333 |
| 9 | Norwood | 8.566667 |
| 10 | Pelham Parkway | 8.600000 |
| 11 | Riverdale | 8.225000 |
| 12 | University Heights | 8.533333 |
| 13 | Wakefield | 7.800000 |
| 14 | Williamsbridge | 8.100000 |
| 15 | Woodlawn | 9.000000 |

Joining previous dataset to the New York one will give us the GPS location of each restaurant as it is shown in the next table:

| | Borough | Neighborhood | Latitude | Longitude | Average Rating |
|-----------|----------------|---------------------|-----------------|------------------|-----------------------|
| 0 | Bronx | Baychester | 40.866858 | -73.835798 | 8.400000 |
| 1 | Bronx | Bedford Park | 40.870185 | -73.885512 | 8.500000 |
| 2 | Bronx | City Island | 40.847247 | -73.786488 | 8.266667 |
| 3 | Bronx | Co-op City | 40.874294 | -73.829939 | 8.075000 |
| 4 | Bronx | Eastchester | 40.887556 | -73.827806 | 8.300000 |
| 5 | Bronx | Fieldston | 40.895437 | -73.905643 | 8.225000 |
| 6 | Bronx | Kingsbridge | 40.881687 | -73.902818 | 8.225000 |
| 7 | Manhattan | Marble Hill | 40.876551 | -73.910660 | 8.500000 |
| 8 | Bronx | Morris Heights | 40.847898 | -73.919672 | 8.533333 |
| 9 | Bronx | Norwood | 40.877224 | -73.879391 | 8.566667 |
| 10 | Bronx | Pelham Parkway | 40.857413 | -73.854756 | 8.600000 |
| 11 | Bronx | Riverdale | 40.890834 | -73.912585 | 8.225000 |
| 12 | Bronx | University Heights | 40.855727 | -73.910416 | 8.533333 |
| 13 | Bronx | Wakefield | 40.894705 | -73.847201 | 7.800000 |
| 14 | Bronx | Williamsbridge | 40.881039 | -73.857446 | 8.100000 |
| 15 | Bronx | Woodlawn | 40.898273 | -73.867315 | 9.000000 |

Conclusion

This brief analysis makes clear that the best place to open a new Mexican Restaurant based on number of competitor would be Manhattan followed by Queens and Brooklyn which are shown to have good market potential.