

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

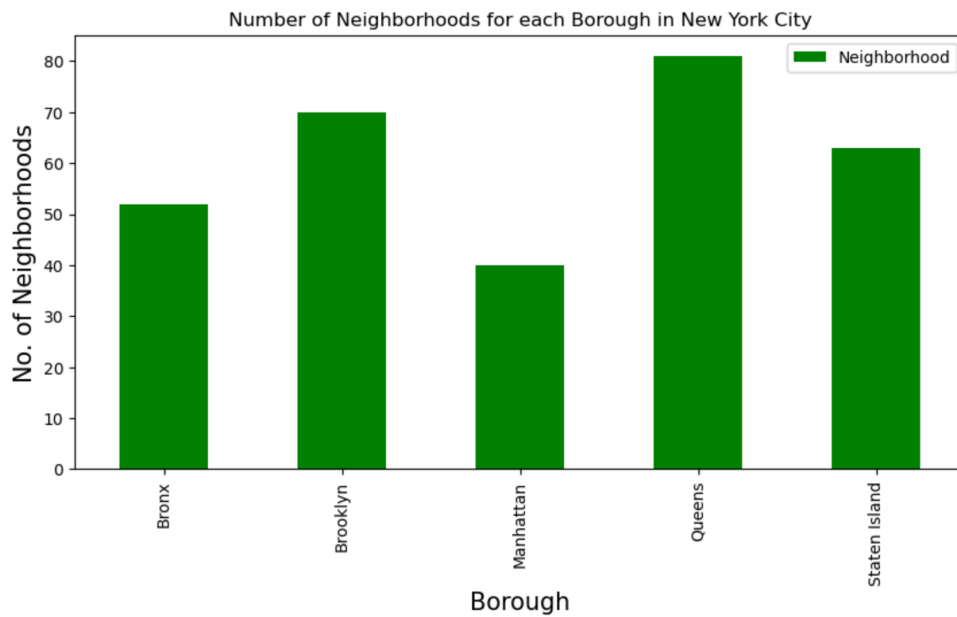
Data about New York City's Boroughs, Neighborhoods and their GPS coordinates will be extracted from a government source in the following link:
https://cocl.us/new_york_dataset

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

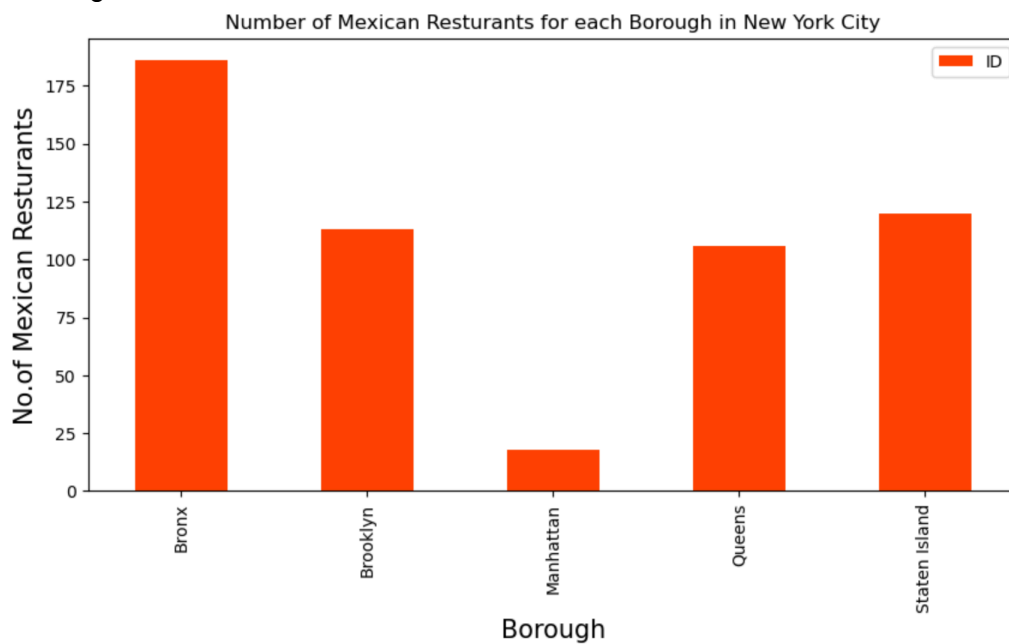
Finally GeoSpace will be helpful to get New York's Boroughs boundaries.
<https://data.cityofnewyork.us/City-Government/Borough-Boundaries/tqmj-j8zm>

Exploratory Data Analysis

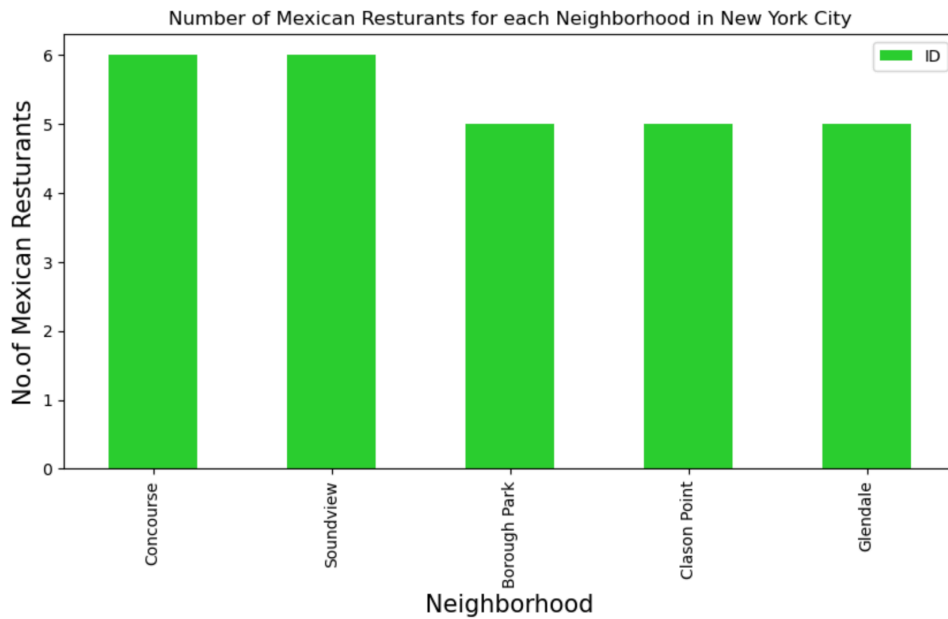
The first exploration reveal that Queens and Brooklyn have the highest number of neighborhoods as we can see in the following table.



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:

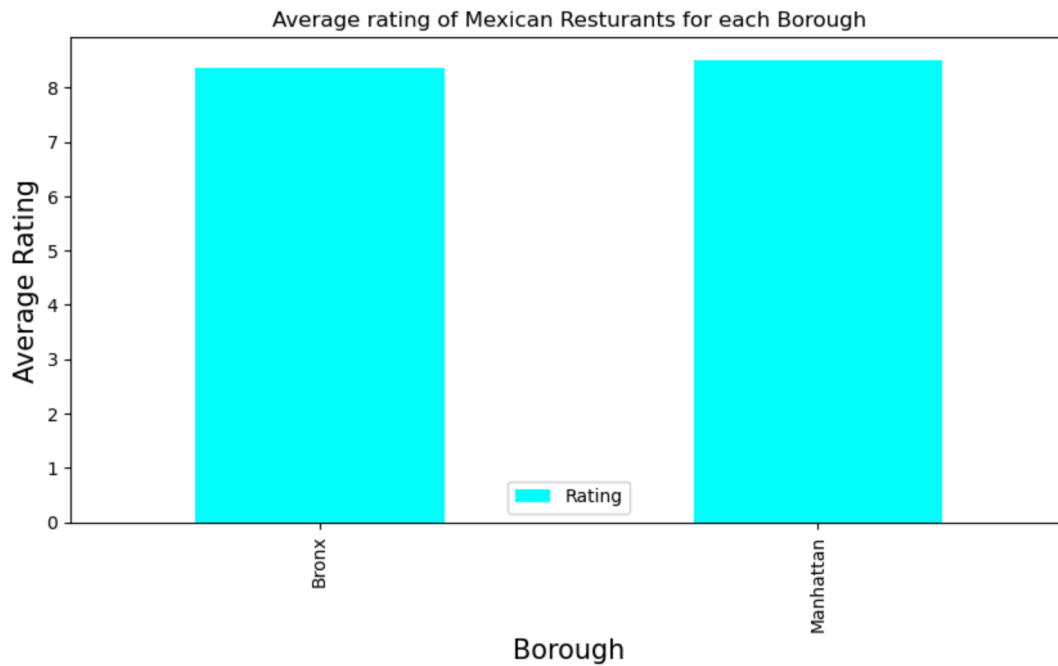


In the following tables we can see in detail each of the restaurants found in those two neighborhoods:

	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.