

Capstone project - The Battle of Neighborhoods
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Introduction:

This capstone project is the analysis around the opportunity to open a restaurant around the Bronx Zoo in New York.

Year 2020 has been very trying times for everyone in the Country as well as an open door for opportunity. As non travel restrictions were put in place, people stayed closer to home, visiting attractions close to home. People were laid off and needed to find other sources of income.

The Bronx Zoo was the attraction identified for our analysis, as family friendly oriented venue. The Capstone Project will analyze the current restaurants close to the Bronx Zoo. The report will feature the detail of each specific type of restaurants as well the mapped locations of the restaurants based on the vicinity of the Bronx Zoo.

Problem:

Due to loss of income, need to look at opportunity in supplementing income in opening restaurant in the Bronx Zoo area

Data Section

As part of the project the following data_json file was used. Data link used was: newyork_data_json
Used New York Data to obtain Boroughs and Neighborhoods Details, of each one of the Neighborhoods in New York.

Foursquare API Data

In order to gather data about different venues in different neighborhoods, including the Bronx, Foursquare locational information was used.

Foursquare is a location data provider with information about venues within a specific area. Information can include venue name, address, postal code, category, longitude, latitude and distance. Foursquare information about the restaurant categories was used as the key analysis of our project.

Methodology

First step was to gather the neighborhood information of New York and break out the Boroughs and Neighborhoods

Once the neighborhoods were determined, and Bronx identified, a map of the Bronx was created.

In reviewing the map of the Bronx, the Bronx Zoo is one of the main attractions of the area.

By using the Foursquare API Data, we were able to determine the longitude and latitude of the Bronx Zoo. Using the search query within the Foursquare user agent, it allowed us to specifically key into the type of restaurants.

The type of data that the Foursquare contained about the venue was:

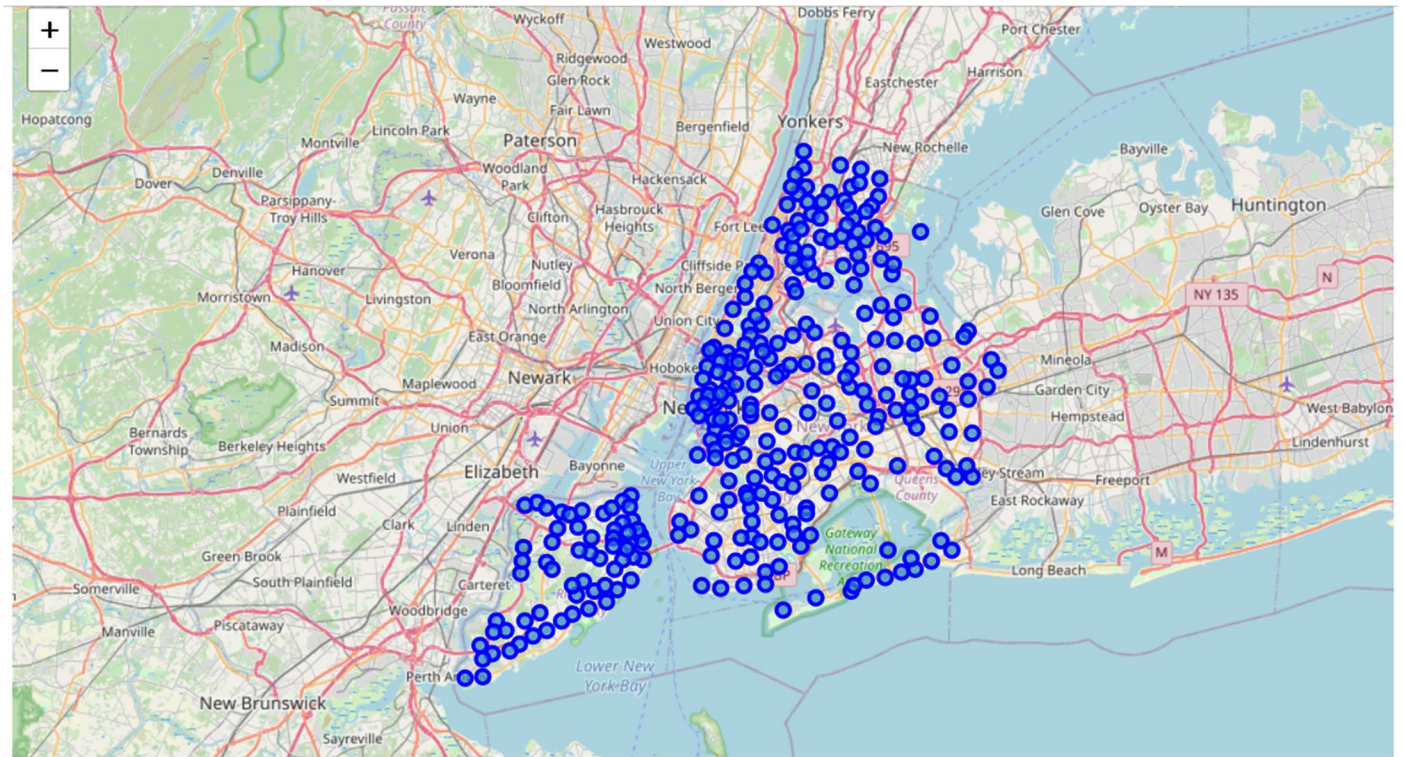
- Name
- Categories
- Address
- Longitude and Latitude
- Distance
- Postal Code
- City, State

This information allowed us to analyze the specific restaurant type of interest near the Bronx Zoo, which was used to finalize the type of restaurant to open

The geographical coordinate of New York City are 40.7127281, -74.0060152.

New York Lat and Longitude is 40.71 and -74.00

New York Map



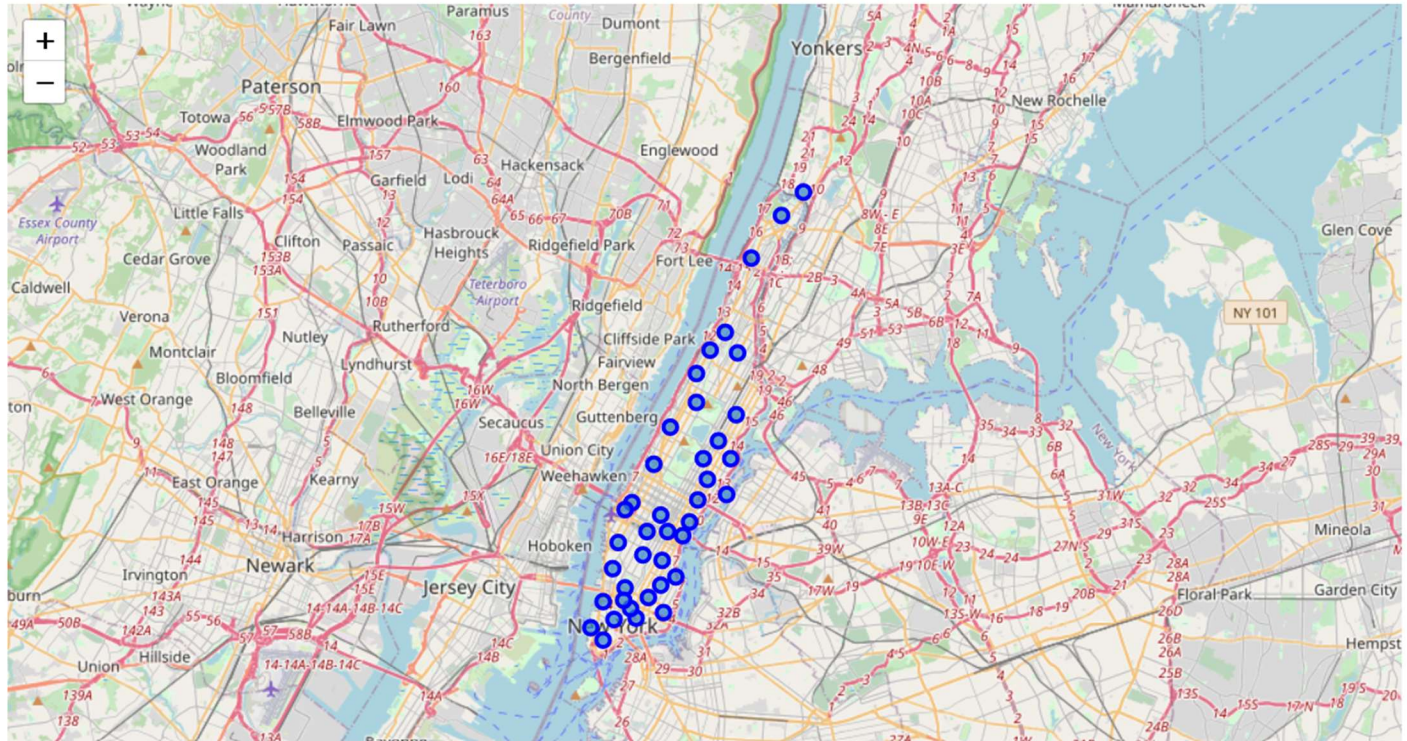
Also looked at Manhattan Data.

	Borough	Neighborhood	Latitude	Longitude
0	Manhattan	Marble Hill	40.876551	-73.910660
1	Manhattan	Chinatown	40.715618	-73.994279
2	Manhattan	Washington Heights	40.851903	-73.936900
3	Manhattan	Inwood	40.867684	-73.921210
4	Manhattan	Hamilton Heights	40.823604	-73.949688

The geographical coordinate of Manhattan are 40.7896239, -73.9598939.

Created Map of Manhattan based on longitude and latitude

Decided Manhattan did not fit the location due to how close the neighborhoods were, and wanted to be close to family attraction.

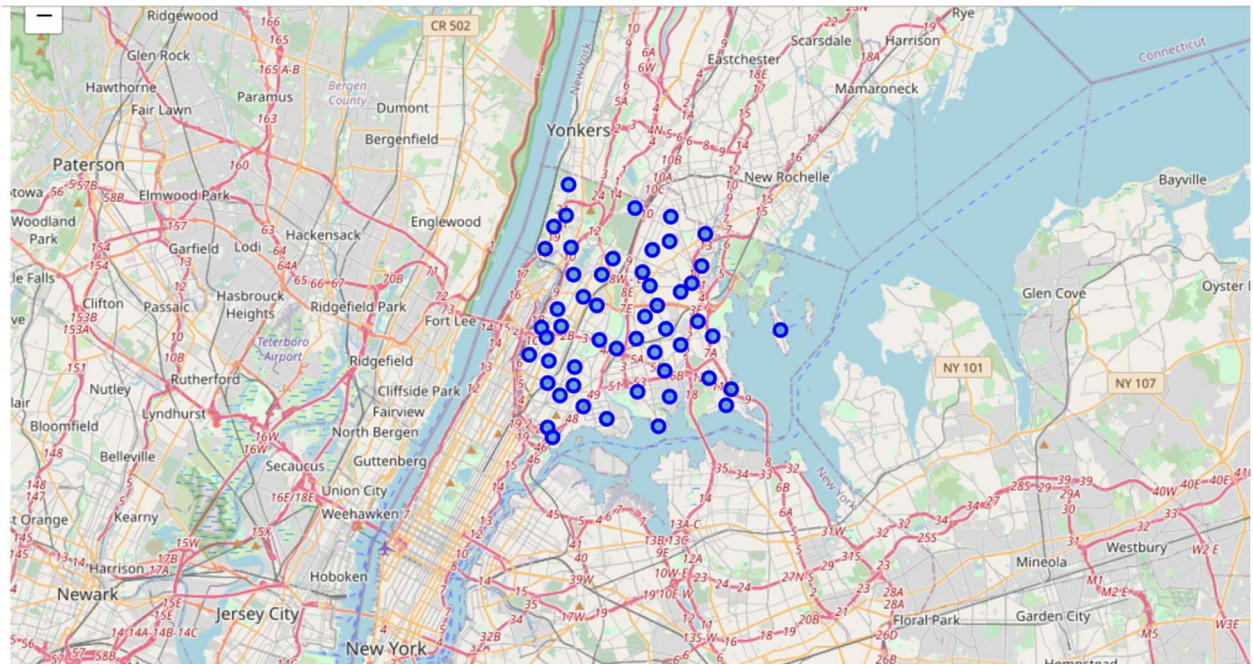


Starting to look at other locations, Bronx

	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

Determined Borough 0 - Bronx had 5 boroughs and 306 neighbourhoods, based on # of neighborhoods, would be good location for a restaurant, especially vicinity to Bronx Zoo.

Map of Bronx



Interest of type of restaurant was Chinese or Italian only.

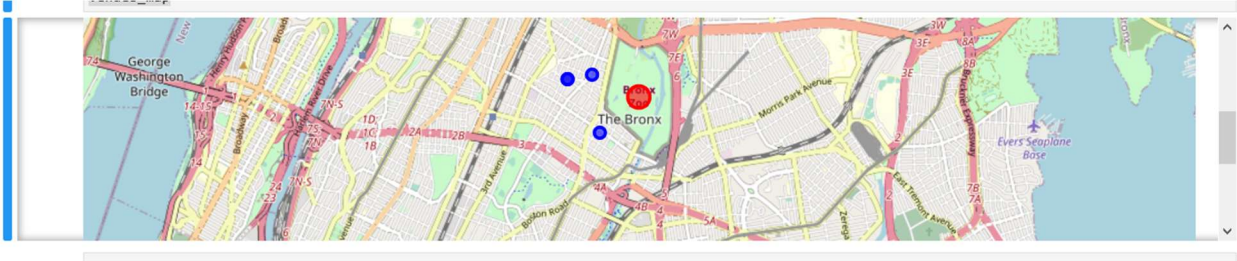
Analyzing current population of restaurants.
Using Foursquare to gather restaurant information within 800 radius

	name	categories	address	lat	lng	labeledLatLngs	distance	postalCode	cc	city	state	country	formattedAddress	id
0	Lung Fong Chinese Restaurant	Chinese Restaurant	870 E 180th St, Bronx, NY 10460	40.845089	-73.883153	[{'label': 'display', 'lat': 40.845089, 'lng': ...	690	10460	US	Bronx	NY	United States	[870 E 180th St, Bronx, NY 10460, Bronx, NY 10...	4ed4326f2c5b695abedee221
1	Dragon Sea Chinese Restaurant	Seafood Restaurant	2302 Crotona Ave	40.851900	-73.884394	[{'label': 'display', 'lat': 40.8519, 'lng': -...	675	10458	US	Bronx	NY	United States	[2302 Crotona Ave, Bronx, NY 10458, United Sta...	4f32777919836c91c7da98c4
2	653 Lucky Chinese Restaurant	Asian Restaurant	653 E 182nd St	40.851396	-73.888245	[{'label': 'display', 'lat': 40.851396, 'lng': ...	963	10457	US	Bronx	NY	United States	[653 E 182nd St, Bronx, NY 10457, United States]	4ea229f77ee52a35dcca6aa5
3	Lucky Chinese Restaurant	Chinese Restaurant	653 E 182nd St	40.851396	-73.888245	[{'label': 'display', 'lat': 40.851396, 'lng': ...	963	10457	US	Bronx	NY	United States	[653 E 182nd St, Bronx, NY 10457, United States]	4f4348da19834bc91f55b4f0

Restaurant detail:

- 0 Lung Fong Chinese Restaurant
- 1 Dragon Sea Chinese Restaurant
- 2 653 Lucky Chinese Restaurant
- 3 Lucky Chinese Restaurant
- 4 restaurants determined

The Following shows the mapping of the Chinses Venue in comparison to the Bronx Zoo.



Now searching for Italian restaurants close to Bronx Zoo

	name	categories	addresses	crossStreet	lat	lng	labeledLatLngs	distance	postalCode	cc	city	state	country	formattedAddresses	id
0	Joes Italian Deli	Deli / Bodega	685 E 187th St	Cambreleng Ave.	40.854391	-73.885367	[{'label': 'display', 'lat': 40.85439129501429, 'lng': ...}]	894	10458	US	Bronx	NY	United States	[685 E 187th St (Cambreleng Ave.), Bronx, NY 1...	4bc33005abf49521fe5cc393
1	Passo's Italian Deli	None	Garden Street	11th Street	40.848891	-73.883530	[{'label': 'display', 'lat': 40.848891, 'lng': ...}]	540	NaN	US	New York	NY	United States	[Garden Street (11th Street), New York, NY, Un...	4b3957bbf964a520fd5a25e3

Italian Restaurant Names

- 0 Joes Italian Deli
- 1 Passo's Italian Deli

Mapping Italian restaurants to Bronx Zoo



There are only 2 Italian restaurants closest to the Bronx Zoo, compared to 4 Chinese Restaurants

Discussion Section

The purpose of the project was to analyze which type of restaurant to open in the Bronx Zoo area, Chinese or Italian.

Each type of restaurant venue was researched how many were already in the area.

By determining how many, it allowed a decision to be made which type of restaurant to proceed to open.

Results Section

Based on the analyzes of this project it was determined that there are 2 Italian and 4 Chinese restaurants close to the Bronx Zoo.

Based on the number of restaurants in the area, the conclusion would be to proceed to open up an Italian restaurant.

Due to the number of Chinese restaurants in the area, it is not recommended to open a Chinese restaurant due to competition from the other Chinese restaurants.

As this conclusion is directly based on the number of restaurants, it does not take into the factor of size or customer rating of each one of the restaurants.

Chinese – 4 Restaurants

Italian – 2 Restaurants ✓