

RESTAURANT LAUNCH IN A COMPETITIVE MARKET

KJM Meghana

Introduction & Business Problems

- **Introduction:**

The City of New York, usually known as New York City (NYC), or New York (NY), is the most populous city in the United States. With an estimated population of 8,398,748 distributed over a land area of approximately 302.6 square miles. It is the largest and most influential American metropolis, encompassing Manhattan and Staten islands, the western sections of Long Island, and a small portion of the New York state mainland to the north of Manhattan.

New York City is in reality a collection of many neighbourhoods scattered among the city's five boroughs—Manhattan, Brooklyn, the Bronx, Queens, and Staten Island—each exhibiting its own lifestyle.

- **Business Problems**

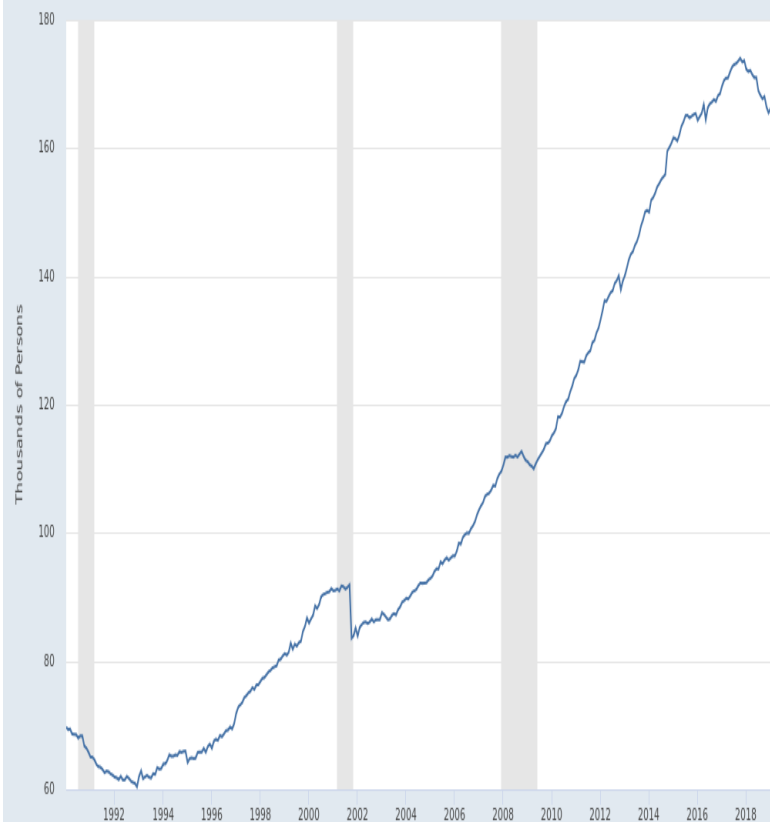
- How much competition will they face with the restaurants in the same area?
- Which neighborhood might have a supportive demographic to help sustain business?
- Where would the restaurant find the space to distinguish themselves from the numerous competition and maximize income?
- How will it tackle the competition going on in the entrepreneurship in management of restaurants?

Data Acquisition and Preparation

- The New York City have a total of 5 boroughs and 306 neighborhoods. In order to segment the neighborhoods and explore them, I have created a dataset that contains the 5 boroughs and the neighborhoods that exist in each borough as well as the the latitude and longitude coordinates of each neighbourhood
- New York City's MOIA Annual Report 2018 was used to examine possible target demographics and extrapolate which backgrounds that might show the most interest. As for any business, having a clientele lays the foundation for progressing towards a bountiful economic future.

- Link to the dataset:
- https://geo.nyu.edu/catalog/nyu_2451_34572
- https://cocl.us/new_york_dataset

FRED — All Employees: Full-Service Restaurants in New York City, NY



Country of origin for NYC immigrants	Number	% of all foreign-born
Dominican Republic	422,244	13.5%
China	318,581	10.2%
Mexico	183,197	5.8%
Jamaica	176,718	5.6%
Guyana	136,760	4.4%
Ecuador	129,693	4.1%
Haiti	88,383	2.8%
Trinidad & Tobago	83,222	2.7%
Bangladesh	80,448	2.6%
India	76,424	2.4%

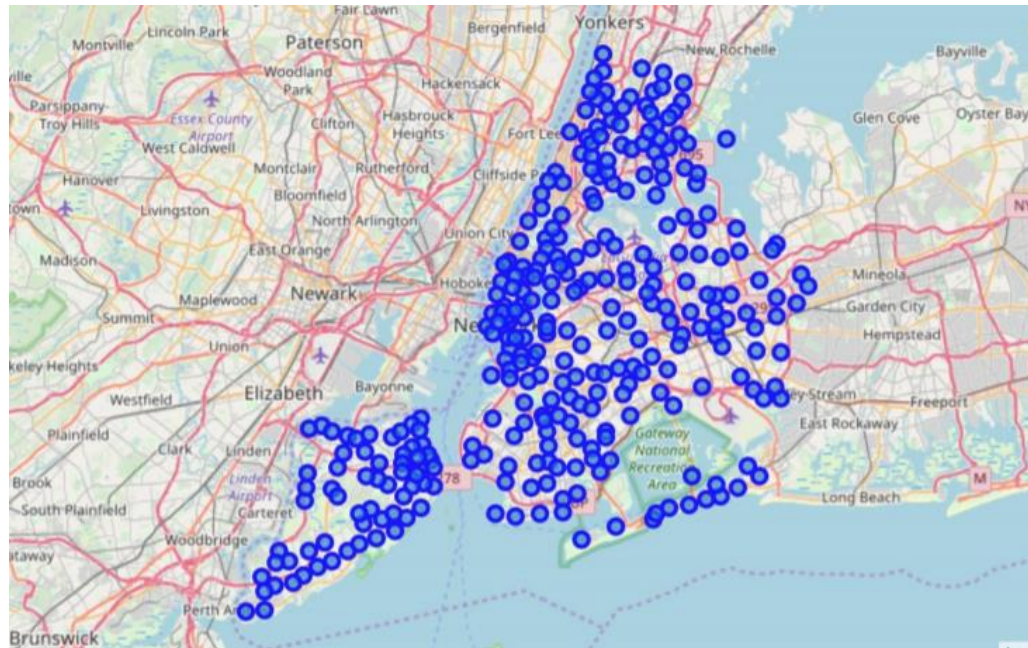
Shaded areas indicate U.S. recessions

Source: Federal Reserve Bank of St. Louis

fred.stlouisfed.org

Methodology

- Finding the co ordinates of NYC downtown area
- From these coordinates we can define our prospective neighborhoods of New York City using latitude and longitude with our JSON file



Results

- In terms of the boroughs, the radius affected 3 boroughs; Manhattan, Brooklyn and Queens. As per Figure 4, Manhattan holds the most values, then Brooklyn and one outlier in Queens. It is important to remember that these restaurants were selected through the radius and restaurants committed to Foursquare's API. There could be more related restaurants outside the scope of these parameters.


```
In [49]: dataframe_filtered.name
```

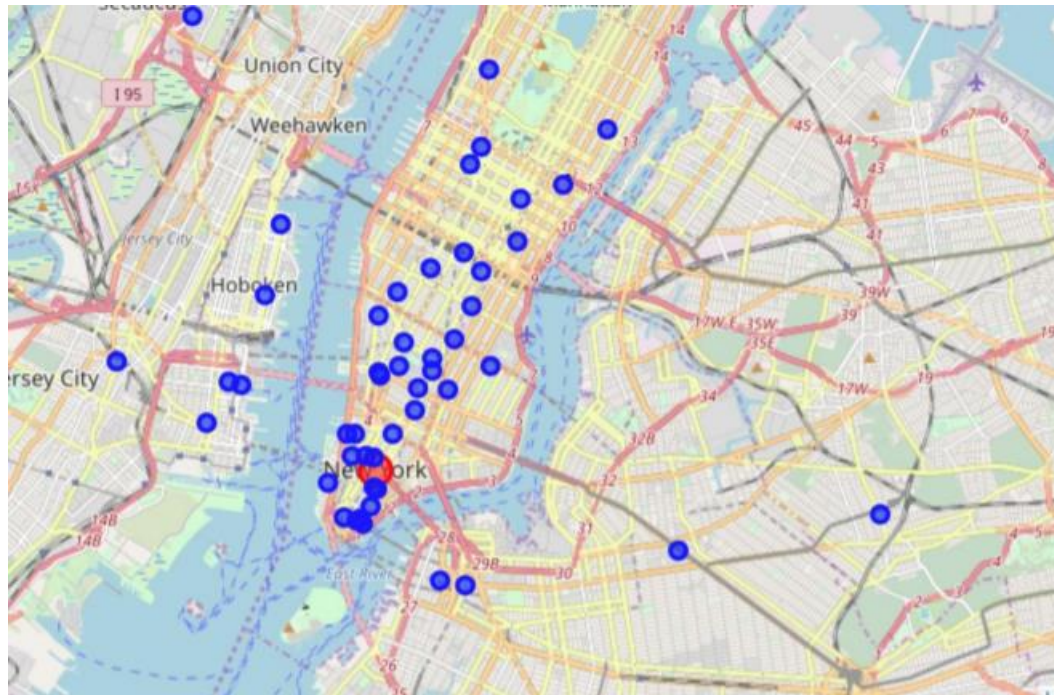
```
Out[49]: 0          Chipotle Mexican Grill
1      Mad Dog & Beans Mexican Cantina
2          Chipotle Mexican Grill
3          Chipotle Mexican Grill
4          Chipotle Mexican Grill
5      Dahlia's Mexican Restaurant
6          Chipotle Mexican Grill
7          Chipotle Mexican Grill
8      Órale! Mexican Kitchen
9          Chipotle Mexican Grill
10         Chipotle Mexican Grill
11         Chipotle Mexican Grill
12         Chipotle Mexican Grill
13         Chipotle Mexican Grill
14         Chipotle Mexican Grill
15         Chipotle Mexican Grill
16      Sinigual Contemporary Mexican Cuisine
17          QDOBA Mexican Eats
18         Chipotle Mexican Grill
19         Chipotle Mexican Grill
20         Chipotle Mexican Grill
21         Chipotle Mexican Grill
22          QDOBA Mexican Eats
23         Chipotle Mexican Grill
24      Zaragoza Mexican Deli-Grocery
25         Chipotle Mexican Grill
26      Panchito's Mexican Restaurant
27         Chipotle Mexican Grill
28         Chipotle Mexican Grill
29         La Sirena Mexican Folk Art
30         Chipotle Mexican Grill
31
```

Figure 5

```
dataframe_filtered.shape
```

```
]: (50, 16)
```

- The possibilities are shown in the map below. From the reported data, we can see that the first snapshot of data is dominated by restaurant chains.



Conclusion

- West Brooklyn appears to be the best starting location. It is close to the city center with direct access to the downtown area via two bridges. The only substantial competition was with Guadalupana Mexican Bakery with a rating of 8.3/10
- Lastly, a base demographic of Latinos were found in New York City. 4 out of 10 top immigrants, mainly from Guyana, Mexico, Dominion Republic, and Ecuador.

• Even aurant.

```
result = requests.get(url).json()
try:
    print(result['response']['venue']['rating'])
except:
    print('This venue has not been rated yet.')
```

8.3

Discussion

- There is high competition in Manhattan, so it would be considered very risky to setup there.
- Since the information is gathered only through foursquare, it might be a unsupervised process.
- Accuracies of models are subjected to change depending on opening/closures of other restaurants.
- The model can be used for a start up which an average accuracy count. This model wont be treated as a totally trustable one.
- Since there is a lot of competition going on the surrounding areas, this cannot assure income hikes.
- Not only this, we should also consider the amount of rent, the traffic, the prices etc before setting up. This can complete the set up considerably.