

Best Location for New Restaurant in NYC

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July 13, 2020

1. Introduction

1.1 Background

One of the most difficult things to consider when starting a new business is location. Take into account the characteristics of the demographic of the surrounding area would benefit one in making a sound decision. However, New York City has already have many types of restaurants. The market is highly competitive and the city is highly developed. The cost associated with opening a new restaurant would be among the highest of all the cities around the world. If the location is strategically selected, the business would be blooming since New York City is a hub of business and commerce.

1.2 Problem

If someone is trying to open a new restaurant in New York City, which neighborhood would I recommend that they open it?

1.3 Interest

This will be of interest for those who are looking to expand their business or simply open a new restaurant.

2. Data acquisition and cleaning

2.1 Data Sources

I will be using the geographical data of current businesses derived from Foursquare to determine the best location to open a new restaurant in New York City:

- New York City Demographics
- Segmentation of the boroughs
- Saturated and Untapped market
- Types of restaurant and competitors around the location

A good recommendation of a new location would be mainly based on lack of

competitors in selected neighborhood.

2.2 Data Cleaning

The main data I will be using to analysis New York City would be as followed and I will use Foursquare API to analysis New York City:

There are 5 boroughs and 306 neighborhoods in New York City. I will use a dataset that contains the 5 boroughs and the neighborhoods that exist in each borough as well as the latitude and longitude coordinates of each neighborhood. The dataset is:

https://geo.nyu.edu/catalog/nyu_2451_34572

New York City Population and demographics:

- https://en.wikipedia.org/wiki/New_York_City
- https://en.wikipedia.org/wiki/Economy_of_New_York_City
- https://en.wikipedia.org/wiki/Portal:New_York_City

New York City's Cuisines:

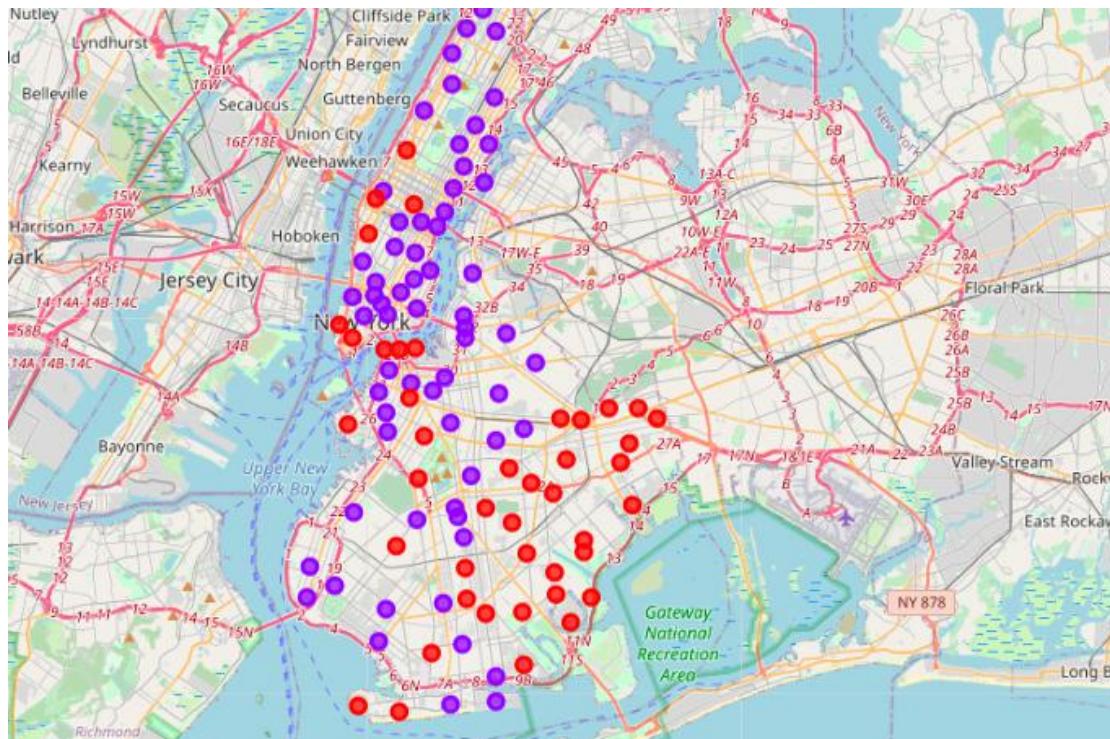
- https://en.wikipedia.org/wiki/Cuisine_of_New_York_City
- https://en.wikipedia.org/wiki/List_of_Michelin_starred_restaurants_in_New_York_City

3. Methodology

Using Foursquare API, I cleaned up the demographic data in NYC, the data table would look like this:

	Borough	County	Estimate_2017	square_miles	square_km	persons_sq_mi	persons_sq_km
0	The Bronx	Bronx	1,418,207	30,100	42.10	109.04	33,867
1	Brooklyn	Kings	2,559,903	35,800	70.82	183.42	36,147
2	Manhattan	New York	1,628,706	368,500	22.83	59.13	71,341
3	Queens	Queens	2,253,858	41,400	108.53	281.09	20,767
4	Staten Island	Richmond	476,143	30,500	58.37	151.18	8,157
5		City of New York	8,336,817	842.343	302.64	783.83	27,547
6		State of New York	19,453,561	1,731.910	47,214	122,284	412

After clustering the different restaurants in NYC, the clusters look like this:



4. Result:

Most of the neighbourhoods in NYC are already saturated, we have to select the least saturated one to open a new restaurant. With thorough data analysis, there is the result:

25	Brooklyn	East Williamsburg	40.708492	-73.938858	20	1
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5. Discussion

New York City is a hub of commerce and business and choosing a new location for opening a new restaurant won't be easy. We need to find the least saturated market of all the neighborhood and East Williams-burg in Brooklyn would be our best choice since it only has 20 restaurant around the area compared to others with 30 or more. Of course, the type of restaurant would be determined by the detailed census data

and this is beyond discussion at this stage.

6. Conclusion

In order to answer the question: where do I recommend opening a new restaurant in NYC, data cleaning and data analysis using Foursquare API was necessary. Finally, we can conclude that East Williamsburg would be an ideal location to open a new restaurant.