

Report

Opening a luxury sushi restaurants in New York City

Introduction and Business Problem

Background

New York City, the most populous city in the United States, has population of 8,398,748, estimated in 2018. New York is also the most densely populated major city in the United States. This city is a cultural, financial, and media capital of the world. Because of this big, New York is the dream city for many businessmen who want to invest their money in this city. However, because of its huge opportunities, the risks are also big. If a businessman invests his/her money on wrong place, they potentially will lose all their money. The reason is because everybody wants to invest money on this city. The market is quite competitive. Moreover, the cost of living and doing business in here may make a businessman cannot live sufficiently. But it is also an opportunity. A man/woman can utilize the high cost of living in this city to make money for them by opening a luxury restaurants. This research will utilize data analysis to help people who want to open a luxury sushi restaurants in New York City.

Description

Opening a luxury sushi restaurant in New York City is not easy. Not everybody in this city can afford to open that kind of restaurants. Moreover, the restaurant need to compete with other restaurants in the same Borough. New York have five boroughs: Brooklyn, Queens, Manhattan, The Bronx, and Staten Island. Choosing which boroughs to open the sushi restaurants is important. Careful analysis about population, gross domestic product, income of each boroughs will be performed in order to collect data for businessman to open the restaurants. The luxury sushi restaurants will require a high gross domestic products borough. Moreover, a high population borough will also help the business go smooth. After choosing suitable borough, income of neighborhood in New York will be analyzed to find some high-income neighborhoods that are suitable for the restaurants. The number of other sushi restaurants in the borough will also be investigated.

Data

Data 1: The number of borough and neighborhood in New York City will be found using New York Geo data. The Geo file take directly from Coursera when doing the lab in Week 2. New York contains 5 boroughs and 306 neighborhood that can be used to analyze to find suitable place for the restaurants

	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

```
len(neighborhoodsinnewyork[ 'Borough' ].unique()),neighborhoodsinnewyork.shape[ 0 ]
```

(5, 306)

-> There are 306 Neighborhoods and 5 Borough includes Bronx, Manhattan, Brooklyn, Queens, and Staten Island [¶](#)

Data 2: The finding of a High Gross Domestic Products borough could potentially be the place for the restaurants. The Data get from the link

https://en.wikipedia.org/wiki/Economy_of_New_York_City. This link will provide the data for Gross Domestic Products of each borough of New York City

Data 3: The finding of population of each Borough in New York City will also be took place. The Data get from the link https://en.wikipedia.org/wiki/Economy_of_New_York_City. This link will provide the data for Population of each borough of New York City. Then, highest population borough will potentially be chosen

Data 4. The finding of income of chosen Borough and its neighborhood in New York City will also be took place. The Data get from the link <https://www.refinery29.com/en-us/nyc-median-income>. This link will provide the data for Income of chosen borough and its neighborhood of New York City.

Data 5. The New York geographical coordinates will be used for Foursquare API. Thus, the data acquainted from Foursquare API will help us discover more about neighborhood in chosen borough of New York City.

Methodology

Exploratory Data Analysis

Data 1: The number of borough and neighborhood in New York City will be found using New York Geo data. The Geo file take directly from Coursera when doing the lab in Week 2. New York contains 5 boroughs and 306 neighborhood that can be used to analyze to find suitable place for the restaurants. The map of New York City and its neighborhoods will be visualized by utilizing Geo files to make a map the represent 306 neighborhoods of New York City



Figure 1. There are 306 neighborhoods and here is the visualization. 5 boroughs and 306 neighborhoods are visualized by this map. This map utilizes Geo file of New York City and the data set of Neighborhood and Boroughs.

Data 2: The finding of a High Gross Domestic Products borough could potentially be the place for the restaurants. The Data get from the link

https://en.wikipedia.org/wiki/Economy_of_New_York_City. This link will provide the data for Gross Domestic Products of each borough of New York City. The Highest number of Gross Domestic Products borough will be chosen for open this luxury sushi restaurant. The Gross Domestic Products means the total value of goods produced and services provided of a borough for one year. The high number of Gross Domestic Products will mean so competitive is high, but it has its reason. How can a borough have high gross domestic products? Because the demand is high. Thus, by evaluating data, Manhattan is the highest gross domestic products borough of New York City.

Data 3: The finding of population of each Borough in New York City will also be took place. The Data get from the link https://en.wikipedia.org/wiki/Economy_of_New_York_City. This link will provide the data for Population of each borough of New York City. Then, highest population borough will potentially be chosen for opening this luxury sushi restaurant.

Population means the number of people living in this borough. Thus, high level of population means the demand of eating is high and the restaurants will have so many customers. The Highest population borough of New York City is Brooklyn.

Data 4. The finding of income of chosen Borough and its neighborhood in New York City will also be took place. The Data get from the link <https://www.refinery29.com/en-us/nyc-median-income>. This link will provide the data for Income of chosen borough and its neighborhood of New York City. After analyzing data 2 and data 3, two boroughs will be chosen that become the

most suitable candidate for opening, which are Brooklyn and Manhattan. Thus, neighborhoods inside those two boroughs will be analyzed to find the highest income of neighborhood inside those two. Because this is a luxury sushi restaurants, highest income is need so the price is affordable for them.

Data 5. The New York geographical coordinates will be used for Foursquare API. Thus, the data acquainted from Foursquare API will help us discover more about neighborhood in chosen borough of New York City.

Results

Data 1. Five boroughs and 306 neighborhoods were found using geo file and data frame. Figure 1 already represent this data frame above for helping us to visualize neighborhoods and boroughs of New York City.

Data 2. The Highest number of Gross Domestic Products borough will be chosen for open this luxury sushi restaurant. The Gross Domestic Products means the total value of goods produced and services provided of a borough for one year

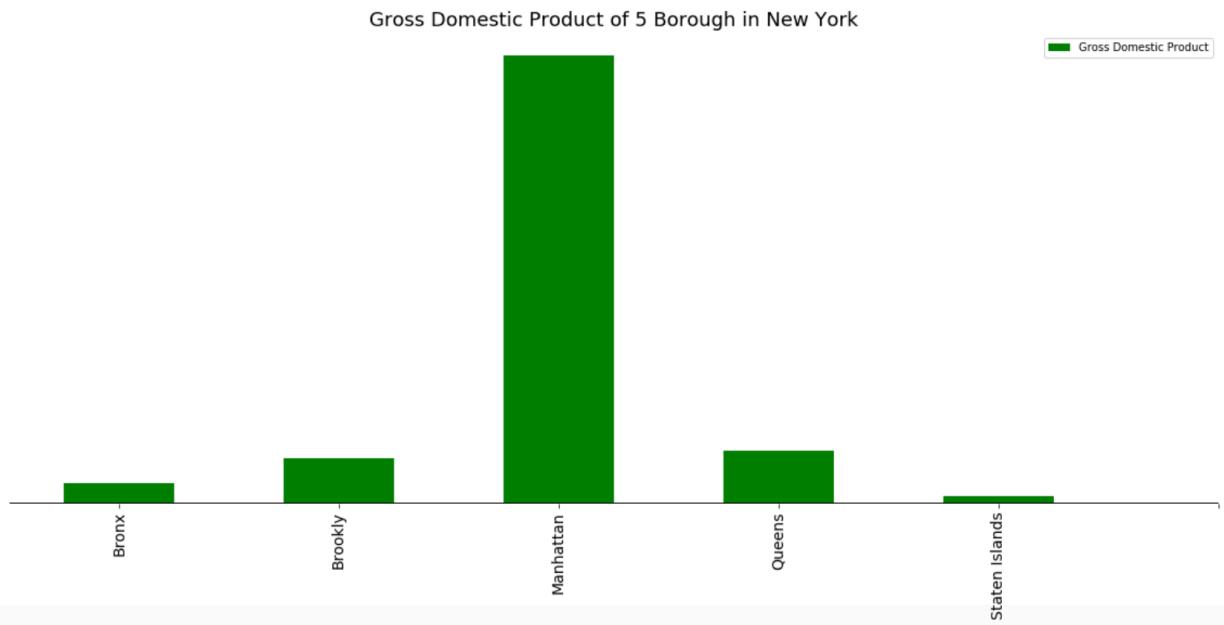


Figure 2. The representation of Gross Domestic Product of 5 Borough in New York. It is easily to see that the Gross Domestic Product of Manhattan is highly over other 4 boroughs. Thus, Manhattan will be my first choice.

Data 3. The highest population borough will potentially be chosen for opening this luxury sushi restaurant. Population means the number of people living in this borough

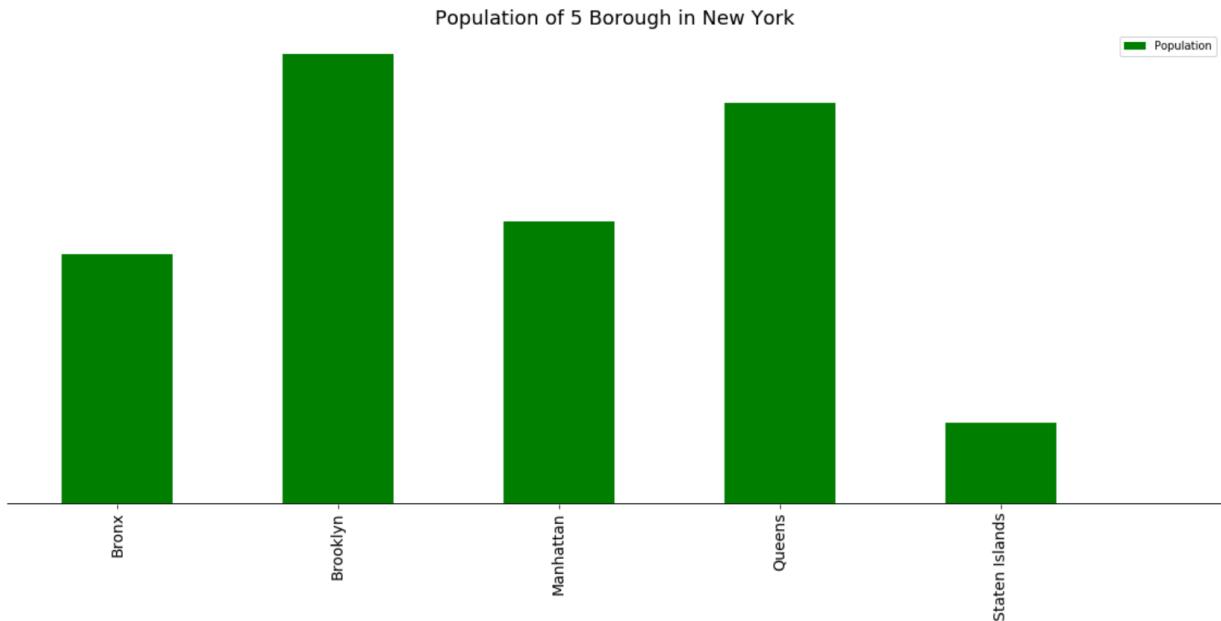


Figure 3. The representation of Population of 5 Borough in New York. It is easily to see that the Population of Brooklyn is highly over other 4 boroughs. Thus, Brooklyn will be my second choice.

Data 4. Ten neighborhoods inside those two boroughs will be analyzed to find the highest income of neighborhood inside those two. Because this is a luxury sushi restaurants, highest income is need so the price is affordable for them.

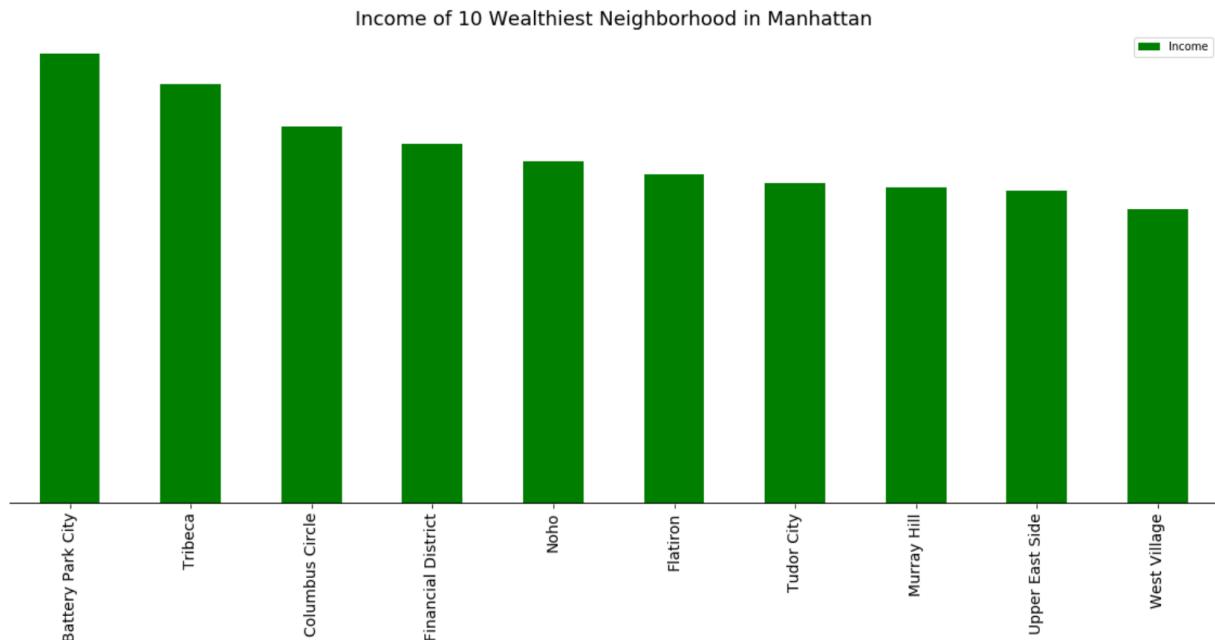


Figure 4. The representation of 10 Wealthiest Neighborhoods in Manhattan in New York.

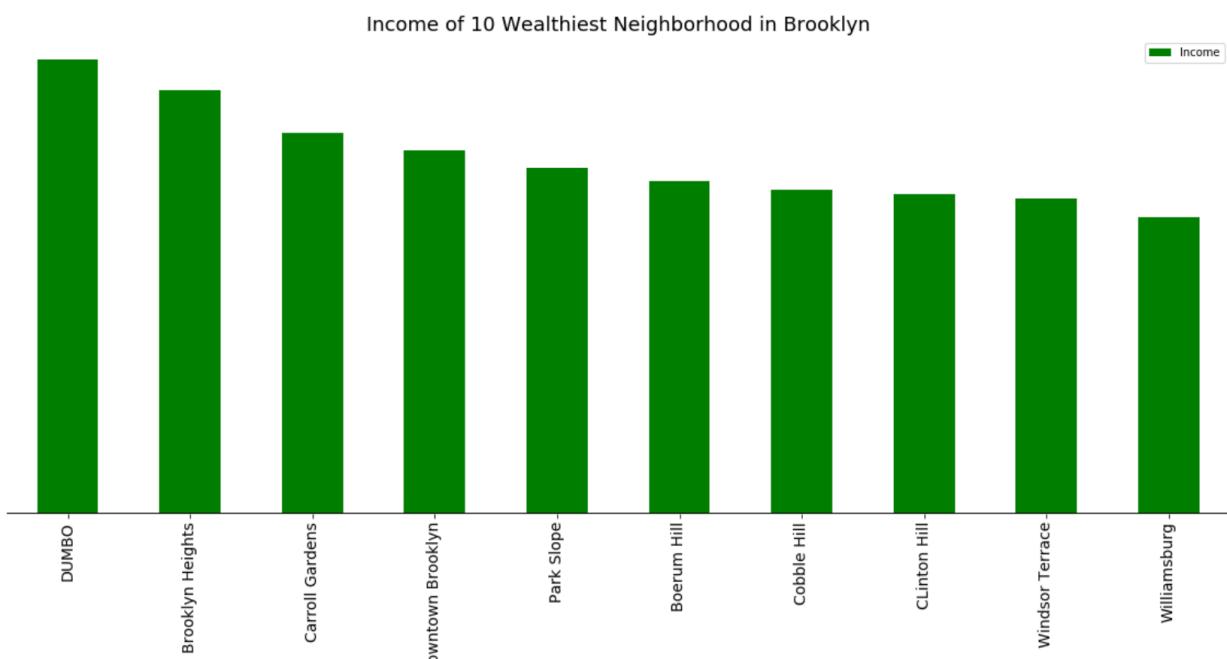


Figure 5. The representation of 10 Wealthiest Neighborhoods in Brooklyn in New York.

Data 5. The New York geographical coordinates will be used for Foursquare API. Thus, the data acquainted from Foursquare API will help us discover more about neighborhood in chosen borough of New York City.

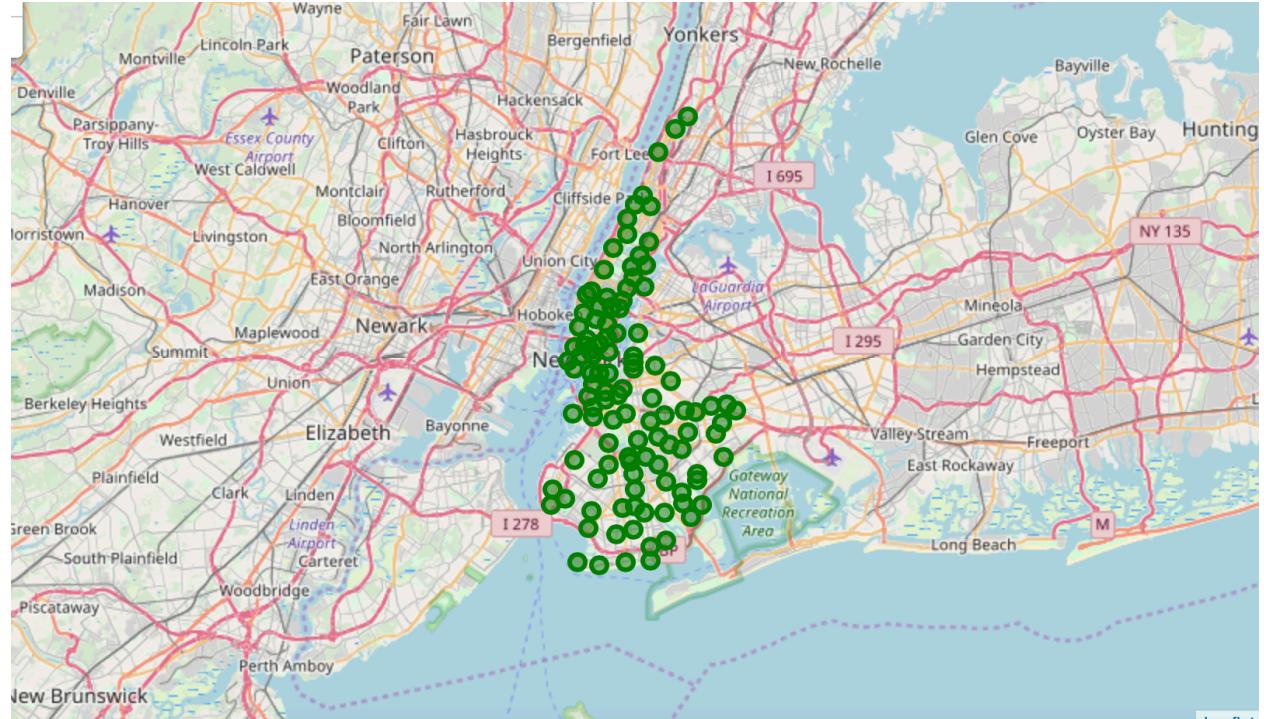


Figure 6. Representation of neighborhoods in Brooklyn and Manhattan of New York City.

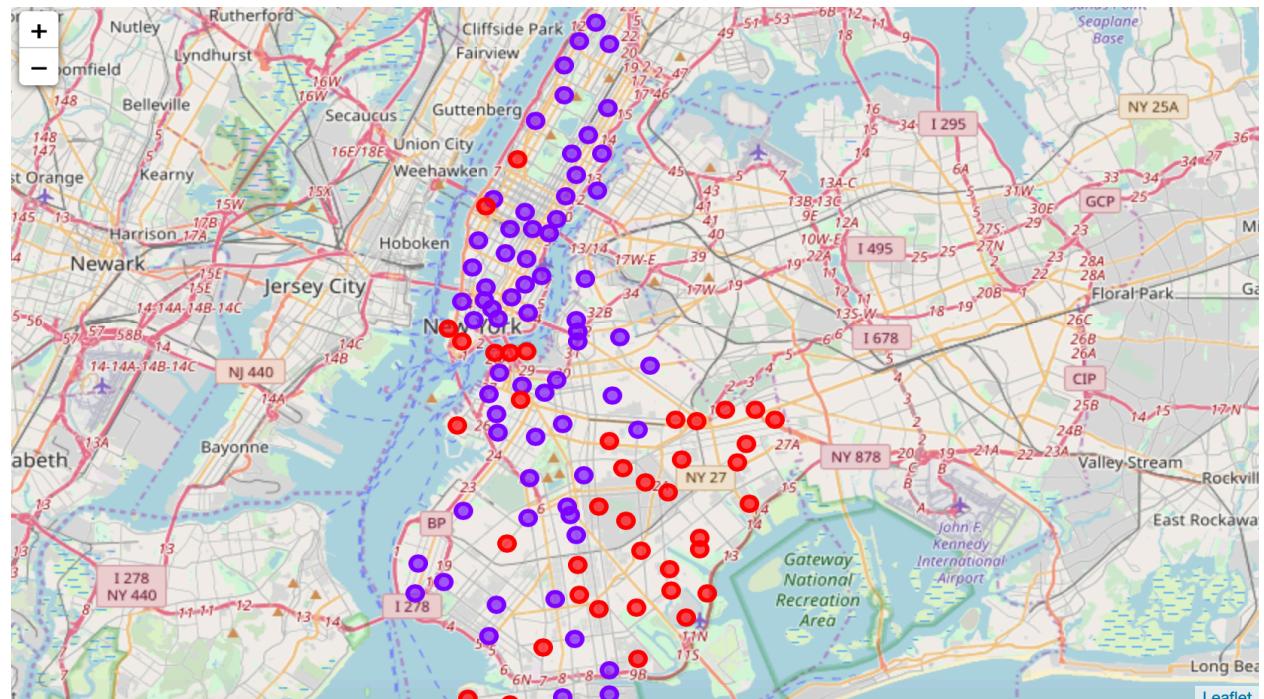


Figure 7. Different type of clusters created by using K-Means for Brooklyn and Manhattan of New York City.

Discussion

- Manhattan and Brooklyn are two most suitable boroughs for opening a luxury sushi stores.
- 10 neighborhood that have highest income of Brooklyn and Manhattan is also suitable for opening this restaurant.
- However, the competitive in these 2 boroughs is high, if the restaurant is unique, it may attracts many customer and earn very high income.

Conclusion

The restaurant need to compete with other restaurants in the same Borough. New York have five boroughs: Brooklyn, Queens, Manhattan, The Bronx, and Staten Island. Choosing which boroughs to open the sushi restaurants is important. Careful analysis about population, gross domestic product, income of each boroughs will be performed in order to collect data for businessman to open the restaurants. The luxury sushi restaurants will require a high gross domestic products borough. After analyzing data to gain information about population and gross domestic products to choose out Brooklyn and Manhattan. Ten highest neighborhoods inside those two boroughs were also found to find the best solution to open this restaurants.