Finding the best locations
To open a Japanese restaurant in NYC

Introduction

This final project explores the best locations for Japanese restaurants throughout the city of New York. As New York is the most diverse city in the US and probably in the entire world as well, it has a long tradition of different ethnical restaurants. Now when the idea of a healthy lifestyle conquered the minds of people all over the country, Japanese restaurants became extremely popular, as they offer a healthy alternative to regular American eating habits. That's why potentially the owner of the new Japanese restaurant can have great success and consistent profit. However, as with any business, opening a new restaurant requires serious considerations and is more complicated than it seems from the first glance. In particular, the location of the restaurant is one of the most important factors that will affect whether it will have success or a failure. So, this project will attempt to answer the question "Where should the investor open a Japanese Restaurant?"

Business Situation

The objective of this Capstone project is to select the best locations in the city of New York to open a new Japanese restaurant. Using Data Science methodology and instruments such as Data Analysis and Visualization, this project aims to provide solutions to answer the business question: Where in the city of New York, among all the boroughs and neighborhoods should the investor open a Japanese Restaurant?

This project will provide investors a brief reference for locations to invest in a Japanese restaurant in the city of New York. Basically, NYC is a great place to get into a food business because of its diverse culture and huge amount of population and tourists. There are many restaurants categories such as Chinese, Indian, French, etc. However, Japanese has become

extremely popular, as worship to Orient culture and it offers a healthy alternative to regular American comfort foods.

Data

To solve the problem, we will need:

- New York City data containing the neighborhoods and boroughs.

- Latitude and longitude coordinates of those neighborhoods. This is required to plot the map and get the venue data.

- Venue data, particularly data related to restaurants.

We are going to use this data to perform further analysis of the neighborhoods. This project will require using of many data science skills, from web scrapping (open-source dataset), working with API (Foursquare), data cleaning, data wrangling, to map visualization (Folium).

Methodology

- Data will be collected from https://cocl.us/new_york_dataset.

- Datasets will be cleaned and processed into a dataframe.

- FourSquare will be used to locate all venues and then filtered by Japanese restaurants. Ratings, tips, and likes by users will be counted and added to the dataframe.
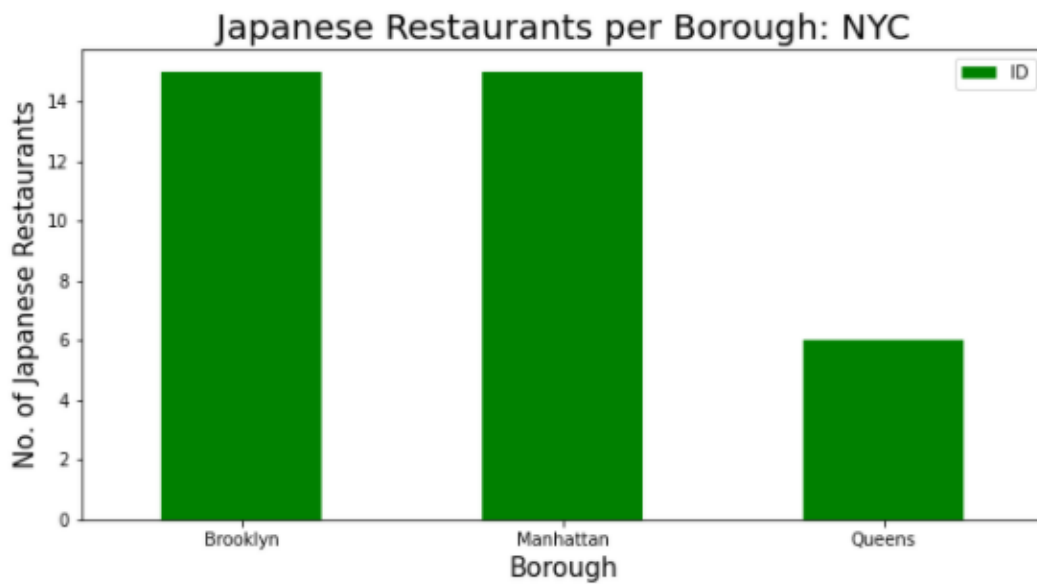
Results

Some of the results of analysis showed below:

- There're 306 different neighborhoods in NYC

- Queens has the highest number of Neighborhoods:

Neighborhoods per Borough: NYC
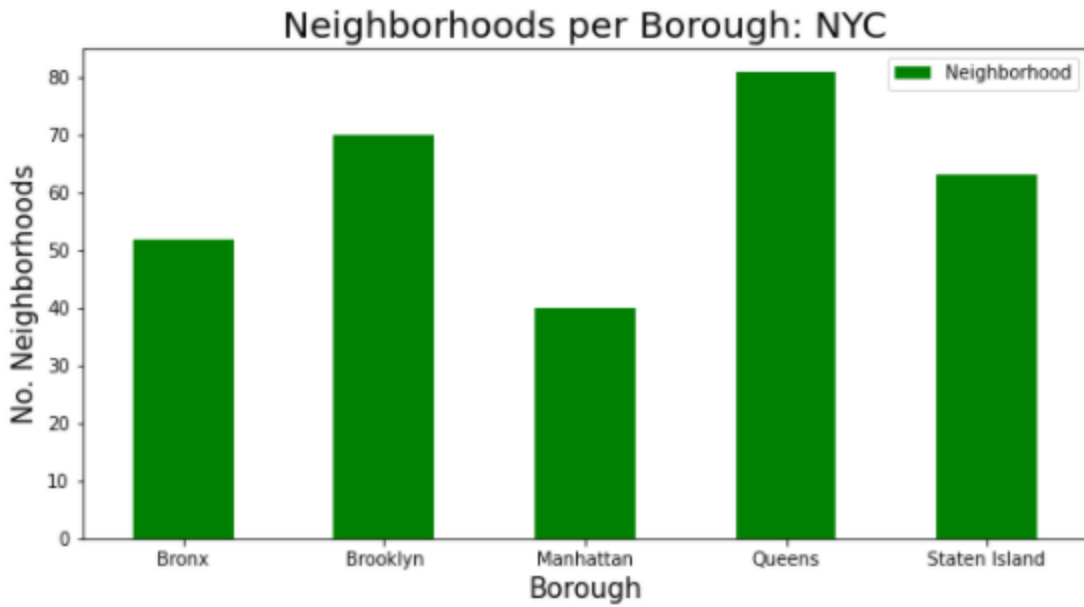
- Brooklyn and Manhattan both have a high number of Japanese restaurants.

Japanese Restaurants per Borough: NYC

- Murray Hill in Manhattan has the highest number of Japanese Restaurants with a total count of 3.

Japanese Restaurants per Neighborhood: NYC
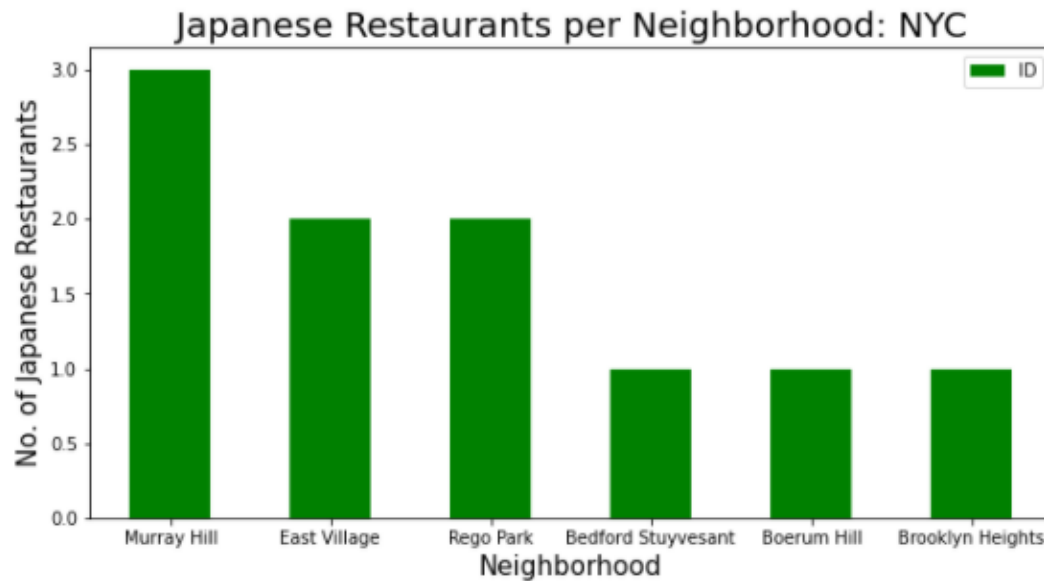
	Borough	Neighborhood	ID	Name
20	Manhattan	Murray Hill	4a99b4f4f964a520f62f20e3	Kajitsu
21	Manhattan	Murray Hill	559cbaa6498eaa4e8d884811	Tempura Matsui
22	Manhattan	Murray Hill	591caee89deb7d0f69be77a2	Omusubi Gonbei

Discussion

Based on the results of our analysis, either Manhattan or Brooklyn could be a good option for opening a new Japanese restaurant in NYC, having the best shot to success.

Competition wise, Brooklyn fewer existing competitors than Manhattan, and has multiple neighborhoods, so it would have a fairly good number of potential customers. In addition, life cost in Brooklyn seems to be much cheaper in Brooklyn than in Manhattan. To start the restaurant, you probably don't need a ton of overhead investment for a very high-end look.

Limitations

As shown in my project, I did not succeed to get the ranking information from FourSquare API. With further development, I could add ratings, tips, and likes by users will be counted to the dataframe. Then sort the dataframe based on rankings, maybe visualized the data on a map.

Conclusions

In this project. I identified the business problem, specified the data required, extracted and prepares the data from APIs, performed data analysis, and in the end provided recommendations for a new Japanese restaurant. During the project, I applied different data science methods and instruments to get the answer to our main question: Where in the City of New York should the investor open a Japanese restaurant. The findings of this project will help us better understand the advantages and disadvantages of different New York neighborhoods/boroughs in terms of competition of opening a Japanese restaurant.