Opening a New Restaurant in New York City

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**Introduction**

Background:

New York is a city very well known for its diverse selection of cuisine. Many different types of cultures and their cuisines all be found within a relatively close distance. We will be analyzing Filipino cuisine specifically and where a new restaurant would be most successful. It is advantageous to the business to be situated in a Filipino dense neighborhood for example.

Problem:

We will be determining where current restaurants are located and where the best restaurants are located. Businesses within proximity generate friendly competition but also, highly rated businesses might drive our own business down. However, highly rated businesses may also indicate a dense neighborhood with a good Filipino population.

Interest:

Obviously, we want to be located near other Filipino restaurants, to ensure a good Filipino population. We will also be interested in ratings to determine how restaurants perform in different locations. We want our business to be most successful and will be taking into consideration current restaurant locations and ratings.

**Data Acquisition and Cleaning**

Data Sources:

We will be using a data set containing the borough and neighborhood coordinates acquired from <https://cocl.us/new_york_dataset> . Venue locations, as well as ratings, tips, and likes will be acquired using Foursquare API.

Data Cleaning:

Data downloaded from the New York database was organized into a neat data frame containing longitudes and latitudes, organized by borough and neighborhood. Venue information was also organized into a data frame containing all relevant information including likes, ratings, and tips. Coordinates of the venues were also contained within the data frame.

**Methodology**

I first initialized several functions that would later be called to perform various data collection. Functions included a geolocator, venue locator, and venue detail collector. The geolocator function was used to locate New York City, and the venue locator was fed coordinates to find relevant Filipino restaurants within a specified range of the coordinates.

After collecting the restaurant locations, I looked at which borough had the most Filipino restaurants and then which neighborhood had the most locations.

I then called the venue detail function to acquire the number of likes, rating, and tips from Foursquare API using the IDs of the restaurants. Using this information, I was able to gather an average rating of restaurants in specific neighborhoods. A separate data frame containing individual statistics was also created.

Using the average rating of the restaurants, and the coordinates of the restaurants I created a map of showing where the restaurants were located as well as a table containing the average rating of the restaurants within the neighborhood.

**Results**

Below are two graphs detailing the number of restaurants in each borough and neighborhood. The neighborhood graph only includes the top 10 neighborhoods containing restaurants.

A screenshot of a social media post

Description automatically generated

A screenshot of a cell phone

Description automatically generated

From the tables we see that Queens has the most Filipino restaurants, while the Woodside neighborhood has the most out of the neighborhoods. In total there are only 20 Filipino restaurants in the vicinity of the coordinates I provided.

Below is a table containing the average rating of the restaurants according to neighborhood.

A screenshot of a cell phone

Description automatically generated

We see here that while Woodside has the most restaurants it only has an average rating of 8.3. It is important to note that neighborhoods that scored above Woodside such as Lower East Side, only has one restaurant to rate.

A picture containing text, map

Description automatically generated

The above map shows the locations of all the restaurants within the city. Many restaurants are clustered near each other.

**Discussion**

From the average rating table and map, we see that Queens has the most restaurants out of all the boroughs, and Woodside has the most for the neighborhoods. I note that neighborhoods like Noho and Lower East Side rate higher than Woodside but have only one restaurant located there. So the average rating for neighborhoods like Noho contain only one restaurant which is ranked very well. Below is a table containing all the restaurants and relevant ratings.

A screenshot of a cell phone

Description automatically generated

We see that the Woodside restaurants all rank well individually.

As far as recommendations, I would open a restaurant in the Queens borough as the number of restaurants located there indicate a large Filipino community. For a neighborhood, Woodside contains more restaurants that are ranked lower than restaurants in Sunnyside Gardens. More restaurants in a close range could generate friendly competition especially if your restaurant can be rated higher than those in Woodside. Sunnyside Gardens, for example, can provide a new venture opportunity. While there are not many restaurants, opening your own can introduce new cuisine and potentially attract more customers. Personally, I would open a restaurant in the Woodside area, because I am interested more in a larger Filipino community.

**Conclusion**

From the results and discussion section, I would recommend opening a restaurant in the Queens borough. As it contains the most restaurants already, indicating a large Filipino community. I believe that opening a restaurant near others, such as a neighborhood like Woodside, would guarantee the most customers and stable patronage. Overall, the restaurants are rated well across the city, so competition is tough and really dependent on your location.