A black and white outline of a person's face

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**CAPSTONE PROJECT: THE BATTLE OF NEIGHBORHOODS**

Selecting the best location to open a Vegan SUSHI BAR in Manhattan, New York

Icon

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***The Battle of the Neighborhoods – Final Report***

1. **Introduction:**

The City of New York is the most populated city in the United States. It is diverse and is the financial capital of USA and is multicultural. It provides lot of business opportunities and business friendly environment as Ill as has attracted many different players into the market. It is also a global hub of business and commerce. The city is a major center for banking and finance, retailing, world trade, transportation, tourism, real estate, new media, traditional media, advertising, legal services, accountancy, insurance, theater, fashion, and the arts among others in the United States. This also means that the market is severely competitive. As it is highly developed city so cost of doing business is also one of the highest. Thus, any new business venture or expansion needs to be analyzed very carefully. The insights derived from this analysis will give a better understanding of the business environment which in return would help in strategically targeting the market. This will also aid in the reduction of risk and therefore, the Return on Investment will be reasonable.

**Business Problem**

The City of New York is famous for its excellent cuisines. It's food culture includes an variety of international cuisines influenced by the city's immigrant history. Recently, Vegan Sushi restaurants have become so popular in the United States now that veganism is highly popular in the young hip cultural. Thus, it appears that there is one on every corner and not only in major cities but also have started making appearances in smaller cities internationally. Starting a Vegan sushi restaurant can be a great business opportunity, but I need to distinguish ourselves from others to enjoy steady long-term successes.

If I plan a real restaurant that can demand higher prices for fresh fish and seafood replacement, delivered daily from Japan, I need to focus on neighborhoods and outlets that already attract a sophisticated Vegans as well as the original Japanese clientele. However, if I plan to have a cheaper buffet restaurant, it points to the masses looking for affordable high-traffic locations in large shopping centers and other local points of interest. Therefore, it is evident that in order to survive in such a fiercely competitive market, it is very important to systematically and strategically plan. There are various factors need to be studied and considered in order to decide on the most effective location.

My Stakeholder wants to open her business in Manhattan area, therefore I have only focus on that borough during my analysis. The objective is to locate, analyze and recommend to the management which neighborhood of New York City will be best choice to start a vegan sushi restaurant. The Management also expects to understand the rationale of the recommendations made.

This would be a huge interest any stakeholder planning to start a new restaurant venture in New York City.

1. **Data**

**Assumption for the project is that every regular sushi place in New York is a Vegan place.**

**Data 1:** Neighborhood has a total of 5 boroughs and 306 neighborhoods. In order to segment the neighborhoods and explore them, I will essentially need 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. This dataset exists for free on the website. Link to the dataset is: <https://geo.nyu.edu/catalog/nyu_2451_34572>

**Data2:** New York City geographical coordinates data will be utilized as input for the Foursquare API, that will be leveraged to provision venues information for each neighborhood. I used the Foursquare API to explore neighborhoods in New York City. The below is image of the Foursquare API data.

Text

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In addition, Sushi category ID: 4bf58dd8d48988d1d2941735 was used for retrieving data from Foursquare API.

1. **Methodology**

In this project, I used the basic methodology as taught in the labs.

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Above, I have converted addresses into their equivalent latitude and longitude values. Then I used the Foursquare API to then explore neighborhoods in Manhattan, New York. Once that is completed, explore function to get sushi restaurant categories in each neighborhood.

Graphical user interface, application

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Map

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Sushi bars in Manhattan

A screenshot of a computer

Description automatically generated with medium confidence

Next, by using feature to group the neighborhoods into clusters, the K-means clustering algorithm was used to complete the task. Folium library is then used to visualize the neighborhoods in Manhattan and its emerging clusters.

A picture containing graphical user interface

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Map

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1. **Results**

**K-mean Cluster**

Using K-mean to clustering data area with least number of sushi bars

**Cluster 0**

A screenshot of a computer

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**Cluster 1**Graphical user interface, application

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**Cluster 2**Table

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**Cluster 3**Graphical user interface, text, application, email

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**Cluster 4**

Graphical user interface

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Map

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Based on dataframe analysis provided in the slides above, Cluster 3 (The Upper West Side) and Cluster 4 (The Morningside Heights) areas are the best places to open a new vegan sushi bar venture.

1. **Discussion**

In this section, I would be discussing the observations I have noted and the recommendations that I made based on the results.

The analysis was performed on limited data. This may sway either direction however, as there was a good amount of data is available, there was a scope to produce great results.

* There is a very severe competition in Midtown and Soho regions, therefore, I believe that it is very risky to open a new vegan venture in those areas.
* However, I would strongly recommend the Central Harlem region as it has great potentials as it is closer to the Morningside Heights area.
* These findings and recommendations can be further enhanced by adding a more detailed analysis on other factors such as transportation and demographics of inhabitants in the New York region.

Finally, FourSquare proved to be a good source for obtaining data but personally I found it extremely frustrating at times. This is solely because despite having a Developer account, I regularly exceeded my hourly limit locking me out for the day.

1. **Conclusion**

In conclusion, even though all aspects of the goals in this project were met, there is always room for further improvement and development. However, with the goals of the project being met and, of course with some more detailed work, it could easily be developed into a fully pledged application that could support the opening a business idea in an any unknown location (if not several).