The Battle of the Neighborhoods – Report

A. Introduction & Business Problem

Problem Background - Since 2000, China has been New York's leading growth market for exports. The New York Metropolitan Region is home to more than half of the 32 largest Chinese companies with offices in the United States. These companies represent a broad array of industries including shipping, steel, energy and manufacturing firms, and services. Many have chosen to open headquarters in New York in anticipation of eventual listing on the respective New York stock exchanges and entering U.S. capital markets. New York City currently boasts seven Chinese daily newspapers, two Chinese language television stations, and the largest Chinese neighborhood in the United States. New York area airports provide 12 daily flights to Hong Kong and five to Beijing, the most flights out of the eastern half of the United States.

Problem Description - Hence the competitiveness drives business owners to think strategically before opening a store. In this case, a Chinese business owner wishes to open a store that sells high-end products that are particularly catered to the Chinese immigrants. However, most of the Chinatown in New York City is populated with middle-class or lower-class immigrants. To ensure the products will sell, it is crucial to select a location that will give the best ROI.

So in a competitive market like such, there are several factors to consider:

1. New York Demographics
2. New York Neighborhood
3. New York average income sectioned by neighborhood

Target Audience – The Chinese business owner wishes to target customers who have a higher income.

B. Dataset

Below are the dataset that we will be using in solving this business problem

Dataset #1 – in order to select the best neighborhood to open a store, we will need a dataset that sections all the neighborhoods including the names and the latitude and longitude coordinates of each neighborhood.

View the complete dataset at: https://geo.nyu.edu/catalog/nyu_2451_34572

	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

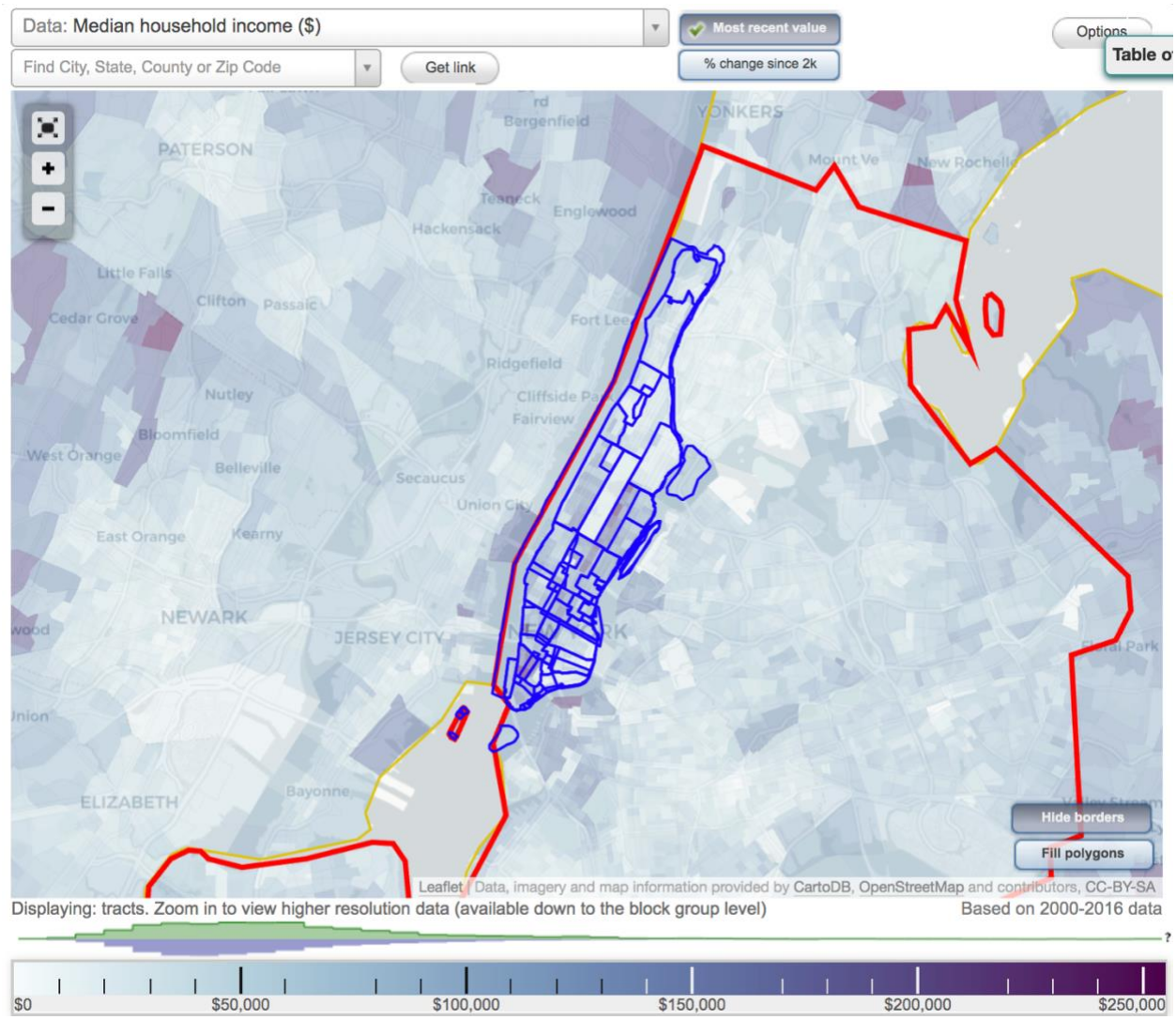
Dataset #2 – Because the products are catered to the Chinese population in New York, we need to retrieve information that tells us the demographics.

View the complete dataset at: https://geo.nyu.edu/catalog/nyu_2451_34572

JURISDICTION NAME	COUNT PARTICIPANTS	COUNT FEMALE	PERCENT FEMALE	COUNT MALE
10001	44	22	0.5	22
10002	35	19	0.54	16
10003	1	1	1	0
10004	0	0	0	0
10005	2	2	1	0
10006	6	2	0.33	4
10007	1	0	0	1
10009	2	0	0	2
10010	0	0	0	0
10011	3	2	0.67	1
10012	0	0	0	0
10013	8	1	0.13	7
10014	0	0	0	0
10016	17	12	0.71	5
10017	0	0	0	0

Dataset #3 – For a high-end product store, we need to open the store at a rich neighborhood. Therefore, we need to know the average income of each neighborhood.

View the complete dataset at: http://www.city-data.com/nbmaps/neigh-New-York-New-York.html

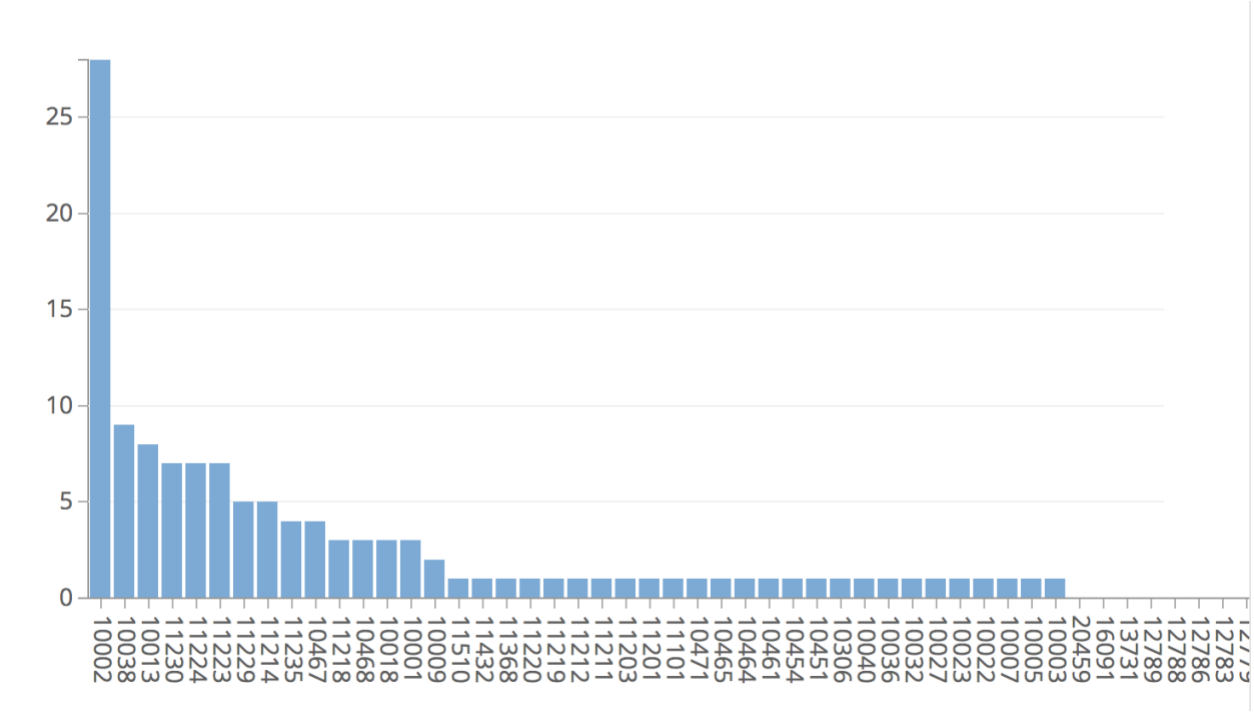


C. Methodology

Dataset #1 – New York City Geographical Coordinates Data

1. Load and scrape the data – newyork_data.json
2. Transform the data into pandas dataframe – df ['NY Coordinates']
3. Use folium and Geopy libraries to generate a map of NY with neighborhoods.

Dataset #2 – This dataset indicates the most populated Asian regions grouped by zipcode. As we can see 10002 has the highest number which is lower East side of New York City. From data #1 we know the 10002 area includes Noho, Chinatown, and Lower East side.



Dataset #3 – This dataset shows the average income of New York
Using Folium library, we generate map that shows area that has a higher income.

The result shows Orchard street, Ludlow street, Essex street and Delancy street have the highest average income.

D. Result

We found out that Lower East side of the New York city has a 38% of Chinese population, ranked the highest. Within the Lower East side region, four streets Orchard, Ludlow, Essex, and Delancy street have a richer Asian. Ideally, it would be the best location to open a Chinese store. However, we cannot ignore other factors such as high rent or residential area would change the fact that these locations can be the best selling region.

This analysis has many limitations that can potentially change the reliability of the result. Depending on the popularity of the products, the store can be either successful or not. But we can conclude that these locations has a lower risk and competition for a high-end store like this.