Tokyo in the Heart of NYC

By: Cedric Hage

Introduction

What are the strategic questions to ask when investing in a restaurant?

1. Strategic location
2. Targeted audience
3. Demand/Supply
4. Competition vs. Previous Experience

Data Acquisition and Cleaning

- New York City Boroughs & Neighborhoods data from https://geo.nyu.edu/catalog/nyu_2451_34572 dataset

- Venues locations, names, & categories called using the Foursquare API

- Duplicate, highly similar or highly correlated features were dropped.

- Cleaned data contains 4 features

Neighborhood Dataset

	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

- Neighborhood/Borough location
- 306 rows =306 neighborhoods
- 5 borrows

New York Neighborhood Markings

Foursquare Call Dataset/Filtered

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Wakefield	40.894705	-73.847201	Lollipops Gelato	40.894123	-73.845892	Dessert Shop
1	Wakefield	40.894705	-73.847201	Shell	40.894187	-73.845862	Gas Station
2	Wakefield	40.894705	-73.847201	Pitman Deli	40.894149	-73.845748	Food
3	Co-op City	40.874294	-73.829939	Modell's Sporting Goods	40.872584	-73.829532	Sporting Goods Shop
4	Co-op City	40.874294	-73.829939	truman track n field	40.874963	-73.830847	Baseball Field

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue_latitude	Venue_longitude	Venue Category
0	Bay Ridge	40.625801	-74.030621	Inaka	40.625141	-74.030418	Sushi Restaurant
1	Greenpoint	40.730201	-73.954241	Chiko	40.731871	-73.954369	Sushi Restaurant
2	Greenpoint	40.730201	-73.954241	Sakura 6	40.728804	-73.953683	Sushi Restaurant
3	Brighton Beach	40.576825	-73.965094	Sachiko Sushi	40.576380	-73.965797	Sushi Restaurant
4	Brighton Beach	40.576825	-73.965094	Umi Japanese Cuisine	40.576609	-73.966667	Sushi Restaurant

- Table 1 represents all respective venues from our Foursquare call
- Table 2 represents our filtered venues obtaining our desired Japanese cuisine venues
- 2643 Venues and 7 attributes

Chinese Cuisine Visualization

- Red marker represents New York City Hall
- Blue markers represents the distribution of Japanese Cuisine restaurants around multiple New York Neighborhoods

Popularity of Venues

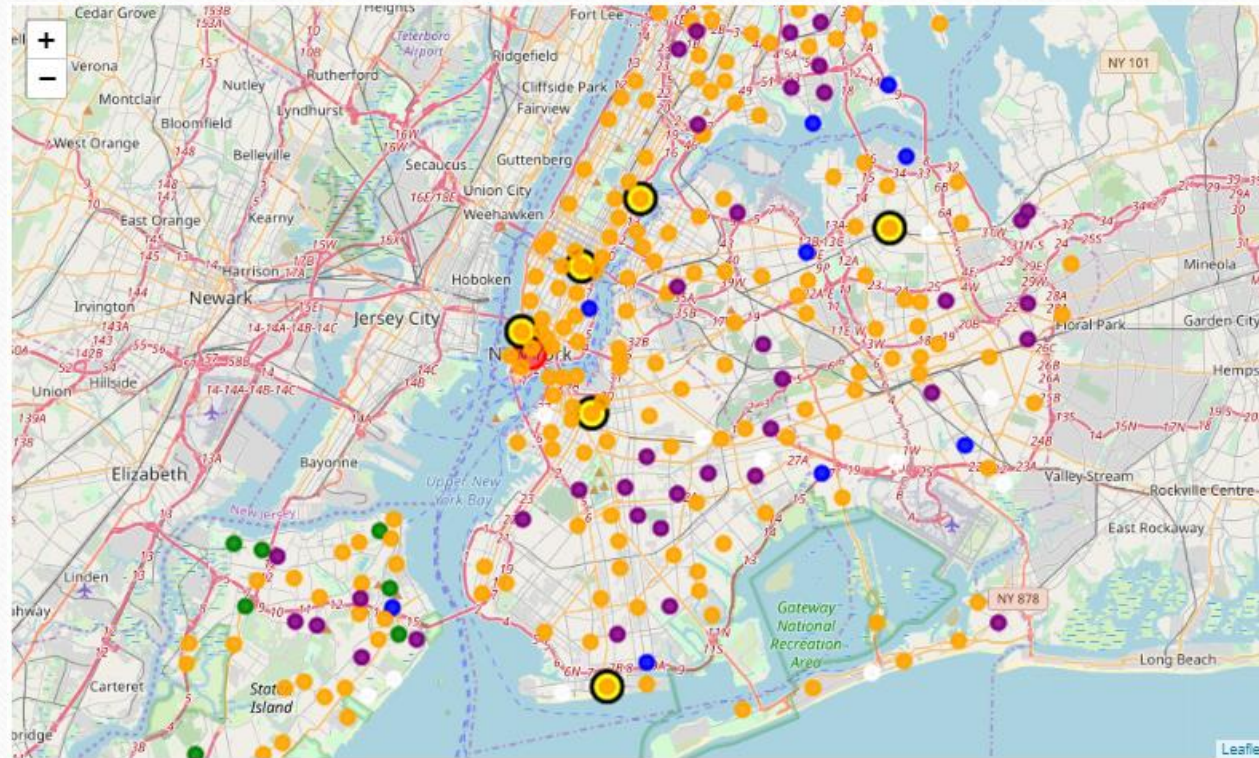|	Neighborhood	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
0	Allerton	Pizza Place	Bus Station	Pharmacy	Martial Arts Dojo	Supermarket
1	Annadale	Cocktail Bar	Women's Store	Fish Market	Farm	Farmers Market
2	Arden Heights	Bus Stop	Women's Store	Flea Market	Farm	Farmers Market
3	Arlington	Bus Stop	Women's Store	Flea Market	Farm	Farmers Market
4	Arrochar	Pizza Place	Women's Store	Fish Market	Falafel Restaurant	Farm
5	Astoria	Gourmet Shop	Intersection	Fast Food Restaurant	Liquor Store	Flea Market
6	Astoria Heights	Plaza	Laundromat	Chinese Restaurant	Food	Women's Store
7	Auburndale	Deli / Bodega	Train Station	Eye Doctor	Falafel Restaurant	Farm
8	Bath Beach	Rental Car Location	Ice Cream Shop	Pizza Place	Video Store	Gas Station
9	Battery Park City	Park	Food Court	Sandwich Place	Coffee Shop	Cupcake Shop
10	Bay Ridge	Italian Restaurant	Pizza Place	Spa	Yoga Studio	Karaoke Bar
11	Bay Terrace	Playground	Plaza	Food	Bus Station	Bakery
12	Baychester	Baseball Field	Spanish Restaurant	Women's Store	Fish & Chips Shop	Falafel Restaurant
13	Bayside	Spa	Dance Studio	Greek Restaurant	Sushi Restaurant	Asian Restaurant
14	Bayswater	Construction & Landscaping	Flea Market	Farm	Farmers Market	Fast Food Restaurant

- Popularity based on frequency of visits
- Venues having Japanese cuisine as top 3 filtered from dataset

Optimal Sushi Restaurant Locations

	Borough	Neighborhood	Latitude	Longitude	Cluster_labels
0	Brooklyn	Brighton Beach	40.576825	-73.965094	2.0
1	Brooklyn	Fort Greene	40.688527	-73.972906	2.0
2	Manhattan	Yorkville	40.775930	-73.947118	2.0
3	Manhattan	Murray Hill	40.748303	-73.978332	2.0
4	Manhattan	Tribeca	40.721522	-74.010683	2.0
5	Queens	Murray Hill	40.764126	-73.812763	2.0
6	Brooklyn	Brighton Beach	40.576825	-73.965094	2.0
7	Brooklyn	Fort Greene	40.688527	-73.972906	2.0
8	Manhattan	Yorkville	40.775930	-73.947118	2.0
9	Manhattan	Murray Hill	40.748303	-73.978332	2.0
10	Manhattan	Tribeca	40.721522	-74.010683	2.0
11	Queens	Murray Hill	40.764126	-73.812763	2.0

- 6 locations having 1st , 2nd, or 3rd or even both Japanese and Sushi restaurants as most common venues
- Divided into clusters of neighborhoods of similar venue popularity

Final Outcome

- Investor to choose one of the 6 available yellow markers as they are the best location for investing in a Sushi Restaurant
- Analysis open for further research based on more features than demographics and frequency of visits

THANK YOU