



Locations for Opening New Japanese Restaurant in Manhattan

APPLIED DATA SCIENCE CAPSTONE PROJECT



Outline

- ▶ Business problem
- ▶ Data
- ▶ Analysis
- ▶ Result
- ▶ Discussion
- ▶ Conclusion



Business Problem

- ▶ Problem
 - ▶ Find good locations for opening new Japanese restaurant in Manhattan, New York City
- ▶ Targeted Reader
 - ▶ Person who are considering his/her own casual style Japanese restaurant within the area of Manhattan

Data

- ▶ Sources of data:

- ▶ New York City Neighborhood information provided by New York (City) Department of City Planning
 - ▶ https://geo.nyu.edu/catalog/nyu_2451_34572
- ▶ New York City Population By Neighborhood Tabulation Areas published by NYC Open Data
 - ▶ <https://data.cityofnewyork.us/City-Government/Manhattan-populations-by-neighborhood/8m6s-esnp>
- ▶ FourSquare for information of existing Japanese restaurants in the area

Analysis

- ▶ Idea on selecting a new location for a new restaurant:
 - ▶ Has a lot of potential customers
 - ▶ The current level of competition is relatively low
- ▶ Procedure
 - ▶ Identify all neighborhoods in Manhattan
 - ▶ Find all existing Japanese restaurants in each neighborhood
 - ▶ Compare to the population in each neighborhood

Market Index

- ▶ Definition:

$$\text{Market} = \frac{\text{Population}}{\text{Total Japanese Restaurants}}$$

- ▶ A high market index suggests that the total number of potential customers per Japanese restaurant in the area is large, and so the level of competition is relatively low.

Result

- ▶ Top 5 neighborhoods in Manhattan for Japanese restaurants with highest market indices:

Rank	Neighborhood	Count	Population	Market Index
1	Roosevelt Island	1	80771	80771
2	Morningside Heights	1	55929	55929
3	Washington Heights	3	151574	50525
4	Marble Hill	1	46746	46746
5	Central Harlem	2	75282	37641

Discussion

- ▶ From the result
 - ▶ Roosevelt Island has a large population and only 1 Japanese restaurant, and so it would be the best place for opening a new Japanese restaurant as the level of competition at there is small
 - ▶ Other good locations with similar low level of competition are Morningside Heights, Washington Heights, Marble Hill and Central Harlem, in which their populations are also high and there are not too many similar type of restaurants competing in the same market



Conclusion

- ▶ Based on the analysis on the distribution of restaurant in Manhattan, New York City with their market indices, several good locations with low level of competition and high population have been identified for opening new Japanese restaurant in the Manhattan area.