

The Battle of Neighborhoods (Week 1)

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1 Introduction and Background

1.1 Business Problem

Tokyo is one of the world's leading metropolises, attracting thousands of tourists every day. Meanwhile, with the 2020 Tokyo Olympics approaching, it is profitable for house owners to transform the houses that are available to bed and breakfast. When dealing with such problem, we should consider the visitor flow rates during the day and night as well as surrounding facilities like restaurants and subway line. Moreover, house price should also be taken into consideration during slack season.

In a nutshell, the issue is to find a suitable place with convenient facilities and relatively low estate price. Also, the accommodation places nearby should not already saturated.

1.2 Target People

1. People with several housing in Tokyo city and have the desire to earn money through bnb.
2. Investor who want to set up an inn or run a chain hotel.
3. Tourists from other cities or countries that want to find a good place to stay when traveling to Tokyo.



Figure 1: Panorama of Tokyo

2 Data Preparation

2.1 Web Scrapping

Considering most of the houses is prepared for tourists from other cities and countries who have a tendency to browse the main spots as many as possible, we only focused on Tokyo's central 6 wards: Bunkyo, Chiyoda, Chuo, Minato, Shibuya and Shinjuku.

The web page zip.nowmsg.com contains the postal code of each district and its corresponding location. We used BeautifulSoup to scrap the page and get a table with four cloums: Ward, Major District, Latitude and Longitude.

Some of the places have different postal codes but share the same location. In such circumstance, we clean the data by only leaving a single line.

2.2 Foursquare Data

By using Fousquare API, we were able to get the nearest 100 venues within 500 meters of each district. And the fisrt-step result is as below.

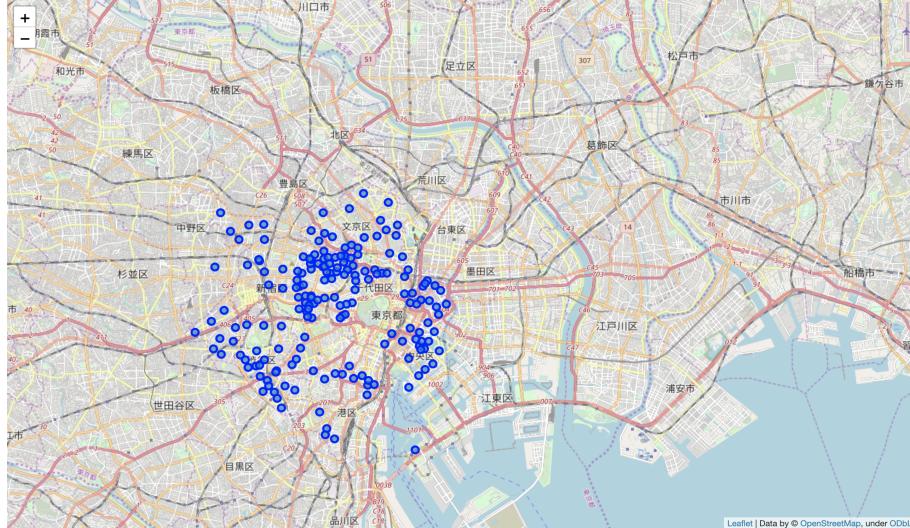


Figure 2: Visualization of Districts

2.3 Other data

From the report published by Japan Tourism Agency in 2014, we are able to view the tourists in each area during the day (6:00 ~ 21:59) and night (22:00 ~ 5:59) respectively. We sorted out the data manually.

In addition, from utinokati.com, we are able to get the information of house price in the 6 wards.

These two data help us make a more comprehensive decision.

	Ward	pop_day	pop_night	Average Unit Price (JPY/sq.m)	pop_day/pop_night
0	Chiyoda	5099	4530	1916817	1.125607
1	Chuo	3703	4199	3124750	0.881877
2	Minato	8156	9868	2322191	0.826510
3	Shibuya	4060	3412	1361241	1.189918
4	Shinjuku	6312	8705	932892	0.725101
5	Bunkyo	1077	1201	963145	0.896753

Figure 3: Population and House Price of each ward