

The Battle of Neighborhoods

February 2020



Profitable to set bed and breakfast in Tokyo.

1. Introduction & Background



airbnb

- 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.
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Target Audience



- Web Scrapping
 - Use BeautifulSoup to scrap the pages.
 - Rent price and tourists population data
 - Search in the Internet and add the data manually.
 - Foursquare Data
 - Use Foursquare API to get the number of venues and their type and location around every neighborhood.
 - Use Foursquare API to get the number of hotels around every neighborhood.
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2. Data



Part of the result.....

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | | Venue | Venue Latitude | Venue Longitude | Venue Category |
|-------|---------------------|------------------------------|-------------------------------|-------------------------------------|--------------------------|-----------------------|------------------------|-----------------------|
| 0 | Agebacho | 35.7024 | 139.7430 | | Kinozen (紀の善) | 35.700595 | 139.742369 | Wagashi Place |
| 1 | Agebacho | 35.7024 | 139.7430 | | 三州屋 飯田橋 | 35.703015 | 139.744219 | Sake Bar |
| 2 | Agebacho | 35.7024 | 139.7430 | | Kagurazaka Uokin (神楽坂魚金) | 35.702105 | 139.741621 | Seafood Restaurant |
| 3 | Agebacho | 35.7024 | 139.7430 | Grilled Aging Beef (グリルド エイジング・ビーフ) | | 35.701735 | 139.742386 | Steakhouse |
| 4 | Agebacho | 35.7024 | 139.7430 | | BEER BAR Bitter | 35.702833 | 139.740863 | Bar |
| ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 13294 | Takanawa | 35.6321 | 139.7342 | | 牛貴族 高輪道場 | 35.631684 | 139.730401 | BBQ Joint |
| 13295 | Takanawa | 35.6321 | 139.7342 | | 由膳 | 35.631039 | 139.729786 | Japanese Restaurant |
| 13296 | Takanawa | 35.6321 | 139.7342 | | キャロル Carol | 35.636063 | 139.733063 | Tea Room |
| 13297 | Takanawa | 35.6321 | 139.7342 | | メリーロード高輪 | 35.636353 | 139.733334 | Shopping Mall |
| 13298 | Takanawa | 35.6321 | 139.7342 | | atelier cuit | 35.636524 | 139.733462 | French Restaurant |

13299 rows × 7 columns

3. Methodology

In [first](#) step…

Count the number of hotels around each neighborhood in 500m.

Sift out a bunch of neighborhoods around which the number of hotels is supposed to be saturated. (By comparing foreign tourists in each ward)

Left [104](#) Neighborhood with hotels nearby undersaturated.

| Neighborhood | Num_hotel |
|------------------------------|-----------|
| Agebacho | 5 |
| Aizumicho | 4 |
| Akagi Motomachi | 2 |
| Akagi Shitamachi | 1 |
| Akasaka (Tsuginobiruonozoku) | 3 |
| ... | ... |
| Yokoteramachi | 1 |
| Yotsuya | 5 |
| Yoyogi | 4 |
| Yoyogikamizoncho | 2 |
| Yushima | 17 |

151 rows × 1 columns

In the second step...

Analyze each neighborhood.

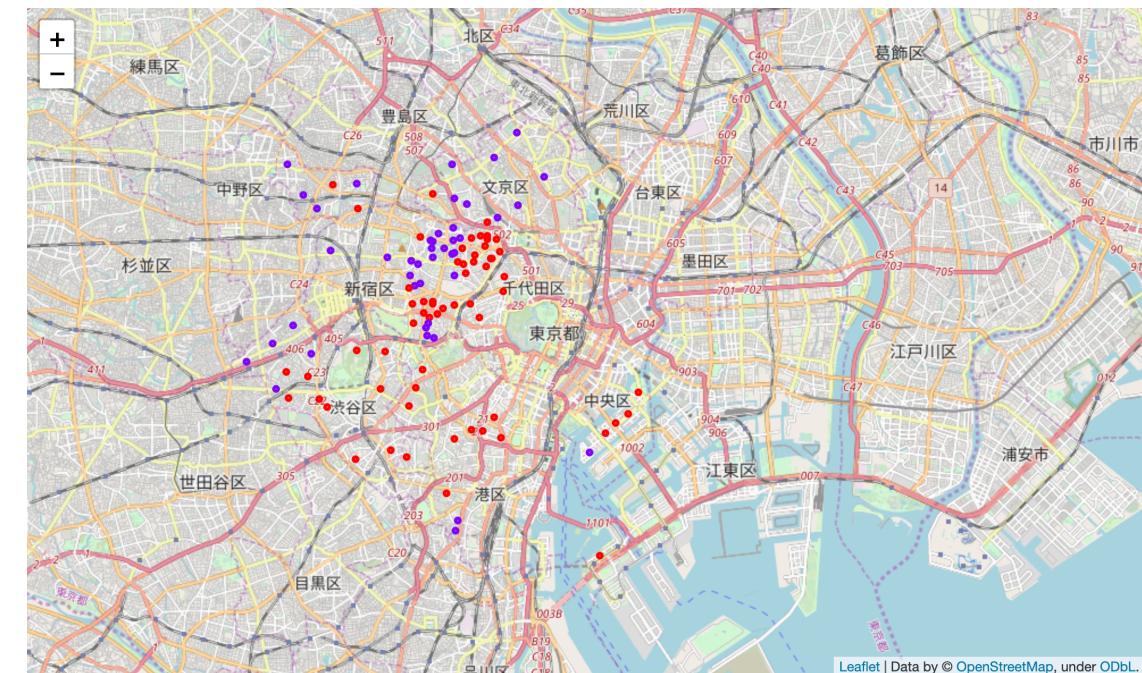
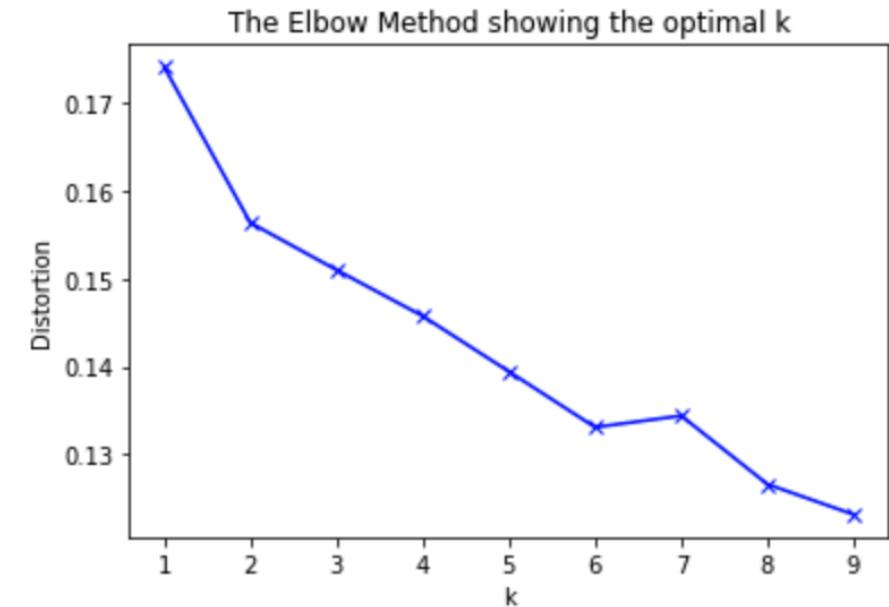
Sort the top 10 most common venues of each neighborhood in descending order.

| | Neighborhood | 1st Most Common Venue | 2nd Most Common Venue | 3rd Most Common Venue | 4th Most Common Venue | 5th Most Common Venue | 6th Most Common Venue | 7th Most Common Venue | 8th Most Common Venue | 9th Most Common Venue | 10th Most Common Venue |
|---|------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|
| 0 | Agebacho | Italian Restaurant | Japanese Restaurant | French Restaurant | BBQ Joint | Sake Bar | Ramen Restaurant | Kaiseki Restaurant | Chinese Restaurant | Soba Restaurant | Yakitori Restaurant |
| 1 | Aizumicho | Sake Bar | Ramen Restaurant | Convenience Store | BBQ Joint | Café | Climbing Gym | Coffee Shop | Japanese Restaurant | Bar | Chinese Restaurant |
| 2 | Akagi Motomachi | Italian Restaurant | Japanese Restaurant | French Restaurant | Sake Bar | Convenience Store | Café | Bakery | BBQ Joint | Steakhouse | Unagi Restaurant |
| 3 | Akagi Shitamachi | Convenience Store | Italian Restaurant | Japanese Restaurant | Bakery | Chinese Restaurant | Dessert Shop | Café | Sake Bar | Indian Restaurant | Bar |
| 4 | Arakicho | Sake Bar | Convenience Store | Ramen Restaurant | BBQ Joint | Japanese Restaurant | Café | Grocery Store | Bar | Rock Club | Climbing Gym |

In the **third** step, we ⋯

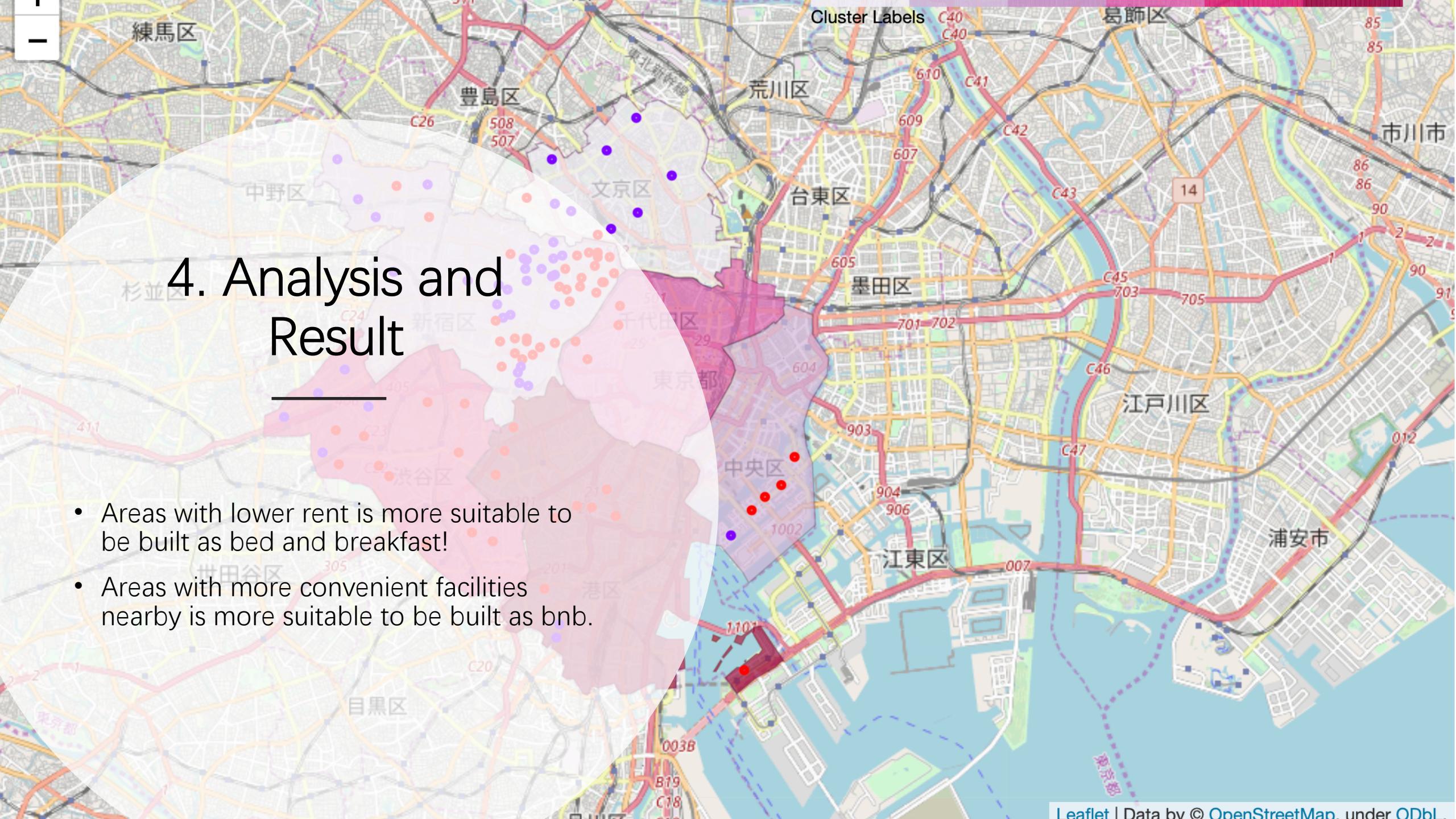
Use elbow method to fix
number of k

Cluster the neighborhood into
several clusters by k-means.



4. Analysis and Result

- Areas with lower rent is more suitable to be built as bed and breakfast!
- Areas with more convenient facilities nearby is more suitable to be built as bnb.



5. Discussion

- The 1st most common venues of cluster 0 can be western restaurants, bars and Café.
- All of the cluster 1 neighborhoods' 1st common venue is convenience store (except 1 bus store)

The FamilyMart logo, featuring the brand name in blue lowercase letters inside a white circle with a green top segment.

6. Conclusion

- In general, Shinjuku and Bunkyo are the most suitable places to set bed and breakfasts
- There is no absolute optimal place to set the bed and breakfast.
- But we can combine the location and the rent price to decide. (ex. Sugacho is a pretty good place)



GRACIAS DANKSCHEEN
ARIGATO SHUKURIA
SHUKURIA TINGKI
JUSPAKHAR BİYAN SHUKRIA
TASHAKKUR ATU YAQHANYELAY
SUKSAMA EKHMET SUKSEMA
GRAZIE MEHRBANI MEHRBANI
MERCI BOLZİN
EFCHARISTO PÄLDIES