

Analyzing Tokyo Wards.

1. Introduction.

1.1 Background

Tokyo city is known as one of the most expensive cities in the world. Which attracts a lot of tourists every year, some of them fall in love with this beautiful country and start to consider moving there. With a lot of entertainment around, which area is better for living might be hard to decide.

1.2 Problem

Data that might help expats to choose which area to live in, showing places to eat around/supermarkets, and price for rent.

1.3 Interest

It might be of interest for anyone, who would like to move to Tokyo as well for those who already live here, or thinking to start a business (for example).

2. Data acquisition and cleaning

2.1 Data sources

For the data source I scrapped the website (gaijinpot.com) to get the information about all 23 Wards and their monthly rent price for 2019.

To get the Latitude and Longitude of each neighborhood I used google search and added it manually, creating a new table.

2.2 Data cleaning

Data scrapped from the website worked pretty well for me and didn't require much cleaning.

2.3 Feature selection

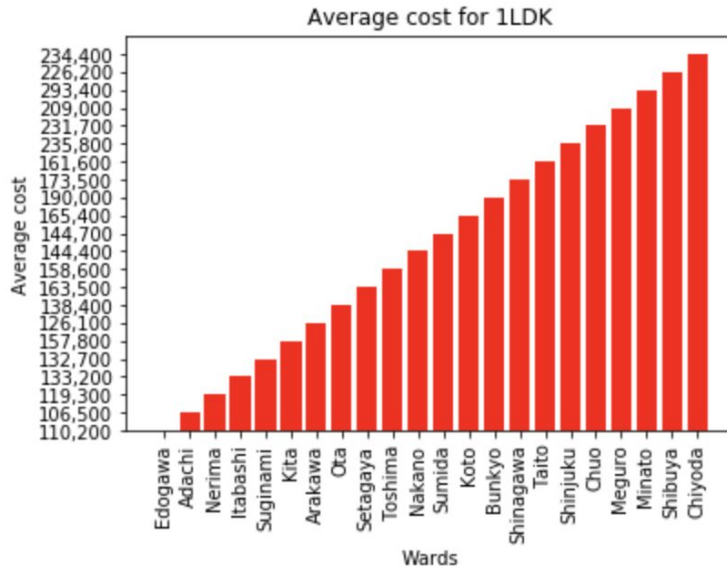
I decided to visualize rent prices for 1LDK apartments as it shows the price difference between neighborhoods and only one feature is enough to see it.

For analyzing venues I narrowed it down to only three hoods, each representing a cluster, so it should be enough to understand the tendency too.

3. Data Analysis

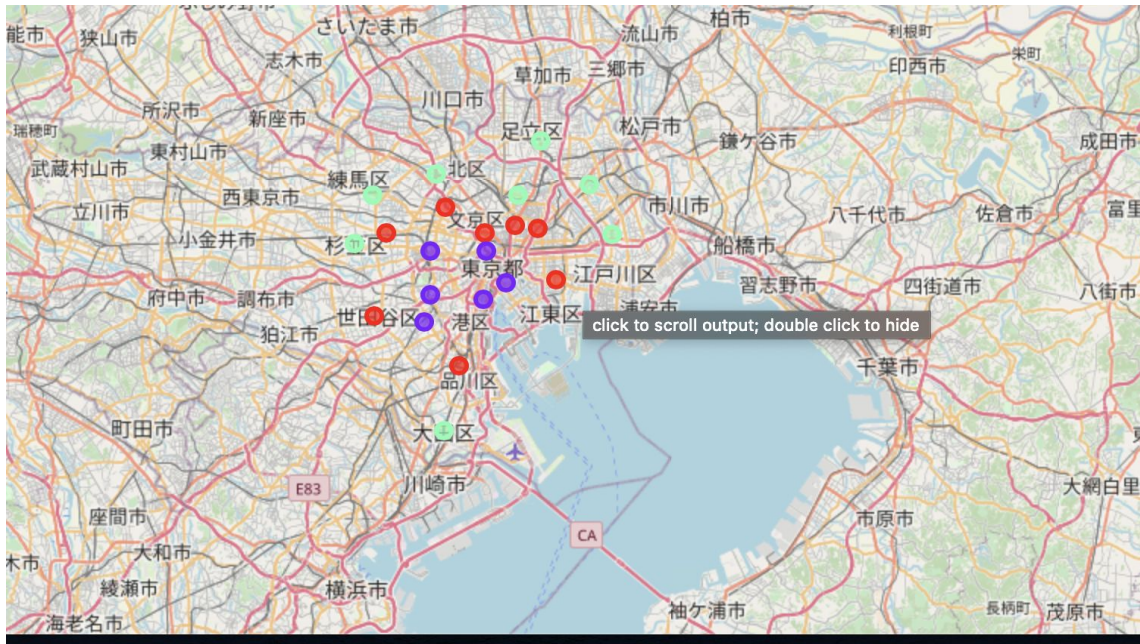
3.1 Rent pricing

I visualized the price in ascending order for each neighborhood, it makes it easier to navigate between the neighborhoods when you know which ones are most expensive.



3.2 K - means clustering

Next step was to cluster the neighborhoods into three categories. The idea is cluster 0 - close to the center, 1 - a bit further, and 2 - on the periphery.



3.3 Getting top 5 venues in chosen Wards

For this part I randomly chose 1 neighborhood as a representative of a cluster. And using foursquare API made a list of top 5 most frequent venues in each of them.

```
----Adachi----
      venue  freq
0  Convenience Store  0.21
1           Bus Stop  0.07
2    Grocery Store  0.07
3           Park  0.07
4    Intersection  0.07
```

```
----Shibuya----
      venue  freq
0         Café  0.13
1    Coffee Shop  0.07
2 Japanese Restaurant  0.05
3           Bar  0.05
4    Art Gallery  0.04
```

```
----Toshima----
      venue  freq
0  Ramen Restaurant  0.10
1         Café  0.07
2       Sake Bar  0.06
3 Japanese Restaurant  0.05
4    Coffee Shop  0.03
```

4. Conclusion

As a conclusion, according to the analysis, we can say that it is pretty clear that areas with higher rent price have more places to go around, such as bars, cafes, on the other side the further the area is - the less places you can find there and it can be more suitable for people who want to live in a quiet place.