Capstone Project

The Battle of Neighbourhood

9th August, 2019

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Introduction

Japan's parliament has approved a controversial new law allowing hundreds of thousands of foreigners into the country to ease labour shortages. From April 2019 onwards, foreigners have been allowed to take up jobs in sectors such construction, farming and nursing. Japan has traditionally been wary of immigration, but the government says more foreigners are needed because of Japan's ageing population. Under the new system, more than 300,000 foreigners could be allowed to work in sectors facing a labour crunch. Japan has a rich cultural heritage when it comes to art, technology and food. Let us analyse the data to find out about the Ramen restaurants in Japan, Ramen being a very popular food item amongst Japanese as well as non-Japanese people.

Data

Picked up list of cities in Japan from - https://en.wikipedia.org/wiki/List_of_cities_in_Japan

Picked up the Geospatial data of the top 9 populated cities from - https://www.latlong.net/category/cities-111-15.html

Target Audience

Restaurant owners who want to decide on if they should add more Ramen outlets, keeping in mind the projected increase in demand Apart from setting up new Restaurants, this data can also help existing restaurant owners understand the customer ratings and feedback and help them take corrective measures

Steps followed

1. Picked up data from Wikipedia to get the list of cities in Japan
2. Picked the data for longitude and latitude for the 9 most populated cities in Japan
3. Using Foursquare API, identified the venues in these 9 cities
4. Plotted the bar graph for the count of Ramen restaurants in the above 9 cities
5. Explored the venues and identified the topmost ratings and likes
6. Plot the trending venue in Tokyo

Key Metrics and Visualization

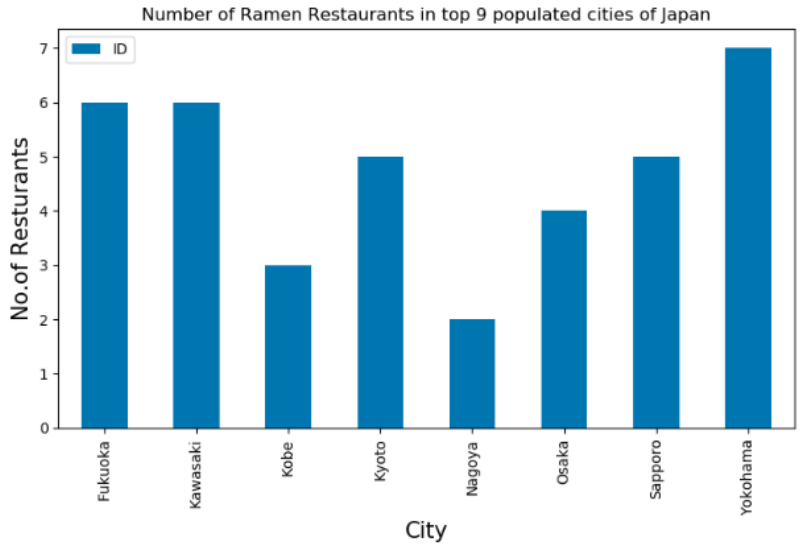
Top 9 Populated Cities with Geospatial data

	City	Prefecture	Population	Area	Latitude	Longitude
730	Tokyo Ward AASpecial wards of Tokyo	Tokyo	8637098	621.81	35.652832	139.839478
355	Yokohama	Kanagawa	3697894	437.38	35.443707	139.638031
555	Osaka	Osaka	2668586	222.30	34.669529	135.497009
0	Nagoya	Aichi	2283289	326.45	35.183334	136.899994
207	Sapporo	Hokkaidō	1918096	1710.00	43.066666	141.350006
118	Fukuoka	Fukuoka	1581527	340.96	33.583332	130.399994
242	Kobe	Hyōgo	1530847	552.23	34.689999	135.195557
399	Kyoto	Kyoto	1474570	827.90	35.011665	135.768326
357	Kawasaki	Kanagawa	1373630	142.70	35.516666	139.699997

Count of Ramen Restaurants in above 9 cities

```
0 Ramen Restaurant(s) in Tokyo Ward AASpecial wards of Tokyo
7 Ramen Restaurant(s) in Yokohama
4 Ramen Restaurant(s) in Osaka
2 Ramen Restaurant(s) in Nagoya
5 Ramen Restaurant(s) in Sapporo
6 Ramen Restaurant(s) in Fukuoka
3 Ramen Restaurant(s) in Kobe
5 Ramen Restaurant(s) in Kyoto
6 Ramen Restaurant(s) in Kawasaki
```

Bar chart of Ramen Restaurants in top 9 cities



Restaurant with Max Likes

```
Prefecture                              Osaka
City                                    Osaka
ID                  552fca5e498e14c3cc433e6f
Name                      Ichiran (一蘭 道頓堀店別館)
Likes                                     326
Rating                                    8.6
Tips                                       86
Name: 9, dtype: object
```

Restaurant with Highest Ratings

```
Prefecture                            Kanagawa
City                                  Yokohama
ID                  4b496456f964a520f16e26e3
Name                Ramen Jiro (ラーメン二郎 横浜関内店)
Likes                                     200
Rating                                      9
Tips                                       35
Name: 2, dtype: object
```

Trending Venue Shin-Kiba Station in Tokyo

Observations

Observing the population and the no. of Ramen Restaurants, it is evident that there is plenty of scope for setting up new restaurants

	City	Prefecture	Population	Area
730	Tokyo Ward AASpecial wards of Tokyo	Tokyo	8637098	621.81
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0	Nagoya	Aichi	2283289	326.45
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118	Fukuoka	Fukuoka	1581527	340.96
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Looking at the average rating, all Ramen restaurants seem to be keeping their customers happy, however, they can do better

```
In [89]: #Average Rating of all Restaurants
         resto_stats['Rating'].mean()

Out[89]: 8.35
```