Halal Certified and Muslim-Friendly Eatery Places in Shinjuku Ward, Tokyo, Japan

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1. Introduction

Muslim arrivals to Japan increased from around 150,000 in 2004 to 700,000 in 2016. It is projected to surpass 1 million by 2018. It will still only represent between 3% to 3.5% of the overall arrivals to Japan. 60% of the arrivals are from South-East Asia, where mostly are a Muslim country. With the numbers keep increasing, there is an increase of 'Global Muslim Travel Market'. [source: Japan Muslim Travel Index, 2017]

Another source is showing that in July 2018, more than 2.8 million overseas visitors, more than 2.4 million (significant majority) were from neighboring countries and region in Asia, including Malaysia, which is an Islamic country and Indonesia, which has the largest Muslim population in the world. [Blog: www.nippon.com/en/guide-to-japan]

According to Mastercard-Crescent Rating report, the key drivers for the continuity of the Muslim Travel market where some of them are;

1. Growing Muslim population
2. Growing middle class/Disposable income
3. Increasing availability of Muslim-Friendly travel services and facilities
4. Increasing access to travel information
5. Business travel

It is estimated that Muslim international travelers (globally) will grow to reach around 160M in 2020 where the travel expenditure will reach to USD 220 Billion. It is also projected that total Muslim travel expenditure will reach USD 300 Billion by 2026. [Source: Mastercard-CrescenRating Global Muslim Travel Index 2017]. With this rate, Tokyo (at least), can take advantage of this by accommodating services such as Halal food and diners, Muslim friendly food and restaurant, prayer facilities, Halal products and Muslim-Friendly airports that will further give benefit to their local economy.

What is Halal food? what is Muslim Friendly Food?

Halal foods are foods that are allowed to be consumed according to Islamic dietary guidelines or Islamic Shari'ah. Muslims can't consume pork, or pork by-product, animals that are slaughter not according to Shari'ah, alcohol and alcohol by-product.

Muslim-Friendly food means, the food that is not processed or prepared with non-halal ingredients like said above. Vegetarian and seafood dishes are some of Muslim-Friendly food example.

Why it Matters?

Meals are a special matter of concern for Muslims because of their religion's dietary requirements, such as the Islamic prohibitions against pork and its byproducts and alcoholic drinks. Only halal food and drink, processed according to Islamic dietary law, is permissible. Halal seals of certification displayed in restaurants, on menus, and on restaurant websites are one way of assuring Muslim visitors that they can eat safely in these places.

Example of Halal seals:

2. Problem Statement

There are limited Halal certified or Muslim-Friendly eatery places available in the busiest city, Shinjuku, in comparison to the numbers of Muslim visitors to Tokyo every year. Some of the visitors prefer to cook at their hotel, apartment or guesthouse rather than eating out while they are in Japan.

3. Data Sources

3.1.Data Acquisition

A lot of the data related to the study is from Crescent Rating website which is a leading authority on Halal travel. In the website, I searched on their 'Reports and Publication' section to get reports related to Muslim visitors to Japan. Below are some of reports and information that are obtained from the website;

1. Japan Muslim Travel Index in a particular year
2. Ranking of prefecture on the travel Index
3. Key drivers in the Muslim travel Market in Japan

Data on statistics are gathered from [Japan Tourism Statistics](#) website. From the reports that are available, I have downloaded;

1. Trend in visitor's arrival to Japan
2. Trend visitors to Japan by Region/Area
3. Trend of travel spending by Country
4. Top countries visiting Japan, 1990-2018
5. Visitors by Prefecture

Tokyo is a large metropolis which has 23 special wards or boroughs, each is a city itself. I have narrow down the scope to one of the busiest wards or boroughs, Shinjuku. I have taken the list of postcode in Shinjuku city from [here](#) and completed the csv file with location address, latitude and longitude from website [here](#) and [here](#). I also have scraped Tokyo boroughs or wards information from [Wikipedia](#) website.

I have done some researched on some of the top blogs or websites for Japan Travels to get the top destination in Shinjuku area or most recommended activities to do in the area. From the 6 blogs p or websites, I have compiled top 10 most recommended places or activities to do in Shinjuku. This data is then saved into a CSV file and exported to Watson studio to insert in to my Jupyter notebook.

I have used Foursquare API to get the latitude and longitude mapped in the Jupyter notebook. It is also used as a tool to help get the area of attractions and locations of dining and eateries in Tokyo.

Another important tool is Python Folium library. It is used to visualize geographic details of Tokyo, Shinjuku ward and its areas. The latitude and longitude information gather in the earlier phase will help to map the area accurately.

As a database, I used GitHub repository to store my files, and coding.

3.2. Data Cleaning and Wrangling

The CSV files obtained from Japan National Tourism Organization has been filtered with year and location or country suitable for the study. Trend of travel spending by Country has been created from multiple sources and combined into one file. I have limited the data to India and South-East country only. The year for the file also has been taken only on 2019 data. The file is then saved into a CSV format.

The challenging part is to get the location latitude and longitude to each postal code in Shinjuku ward. There is no complete latitude and longitude information on the internet that I can scraped, and I have problem to use Geocoder Python package. I have created a CSV file of geo-locations of Shinjuku. There are 99 neighborhoods or postal codes in Shinjuku. The completed file is then uploaded to my Jupyter notebook in Watson studio.

4. Methodology and Data Exploration

4.1.   Preliminary study

I have chosen this study because I love travelling to Japan, and from my multiple visits there, getting on Halal restaurant, diners or eatery places is difficult and limited. Data presented in this section will first shows the trends and figures of visitors coming to Japan. The study will also present the spending trends.

Between year 1964 until 2019, a statistic data collected by Japan National Tourism Organization shows a rapid increase in number of visitors to Japan (figure 1). (Please note that data for 2019 is taken on until month Jan- Sept, hence the total is not reflected a full figure). We can see the growth rate (%) in the tourist arrival to Japan is as high as 47% which was on 2015.

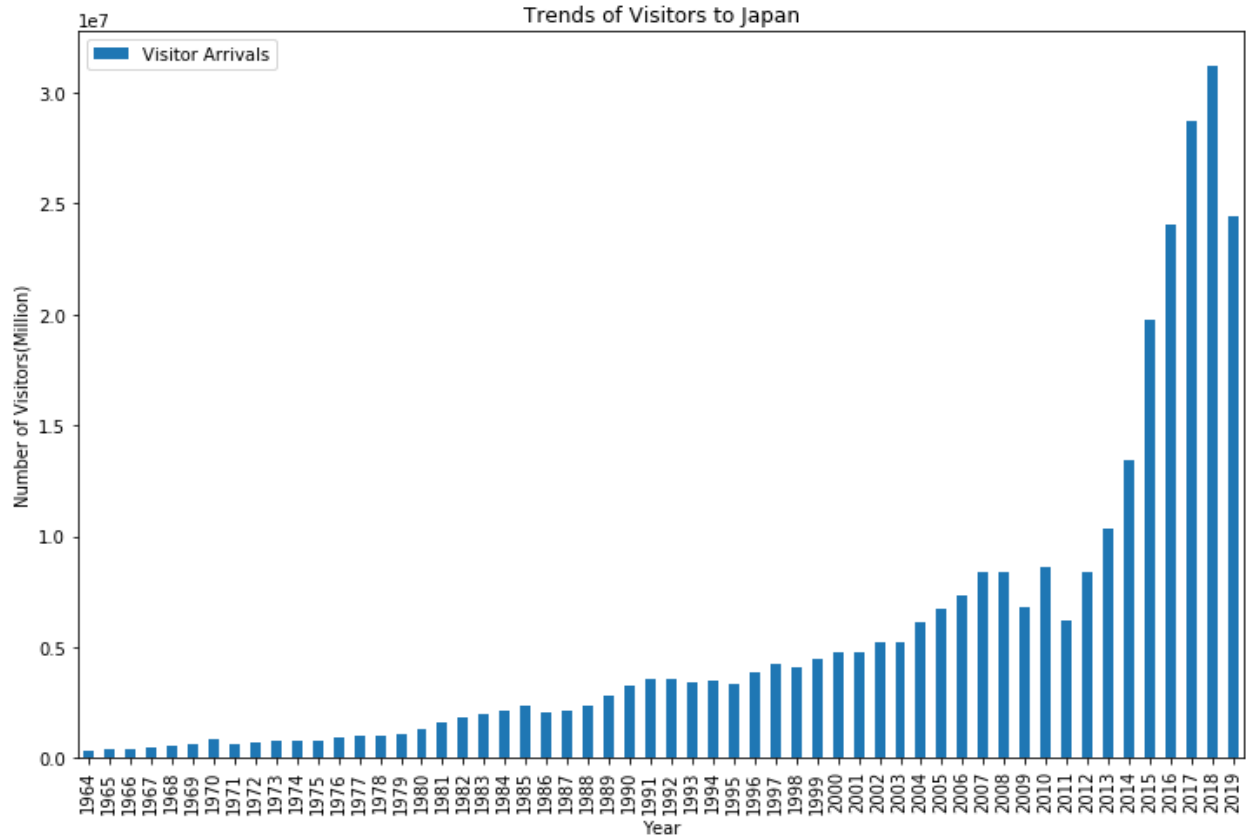|	Year	Growth Rate(%)	Term	Visitor Arrivals
46	2010	26.82781666	Jan. - Dec.	8611175
47	2011	-27.78277064	Jan. - Dec.	6218752
48	2012	34.40164522	Jan. - Dec.	8358105
49	2013	23.9982508	Jan. - Dec.	10363904
50	2014	29.42484801	Jan. - Dec.	13413467
51	2015	47.14621507	Jan. - Dec.	19737409
52	2016	21.79764831	Jan. - Dec.	24039700
53	2017	19.34871483	Jan. - Dec.	28691073
54	2018	8.716244248	Jan. - Dec.	31191857
55	2019	Na	Jan. - Sep.	24417779

Table 1: Growth Rate (%) of Visitors to Japan

Figure 1: Trends of Visitors to Japan by year

The total numbers of visitors to Japan in 2019 is 24,417,779. East Asia has the highest numbers of visitors to Japan in 2019 with 72.6% of the total visitors. Second is South-East Asia and India with 10.9% [figure 2]. The breakdown by country can be shown in figure 3. I have taken only on top 6 of the countries visited to Japan. Data taken is from 1990 – 2018.
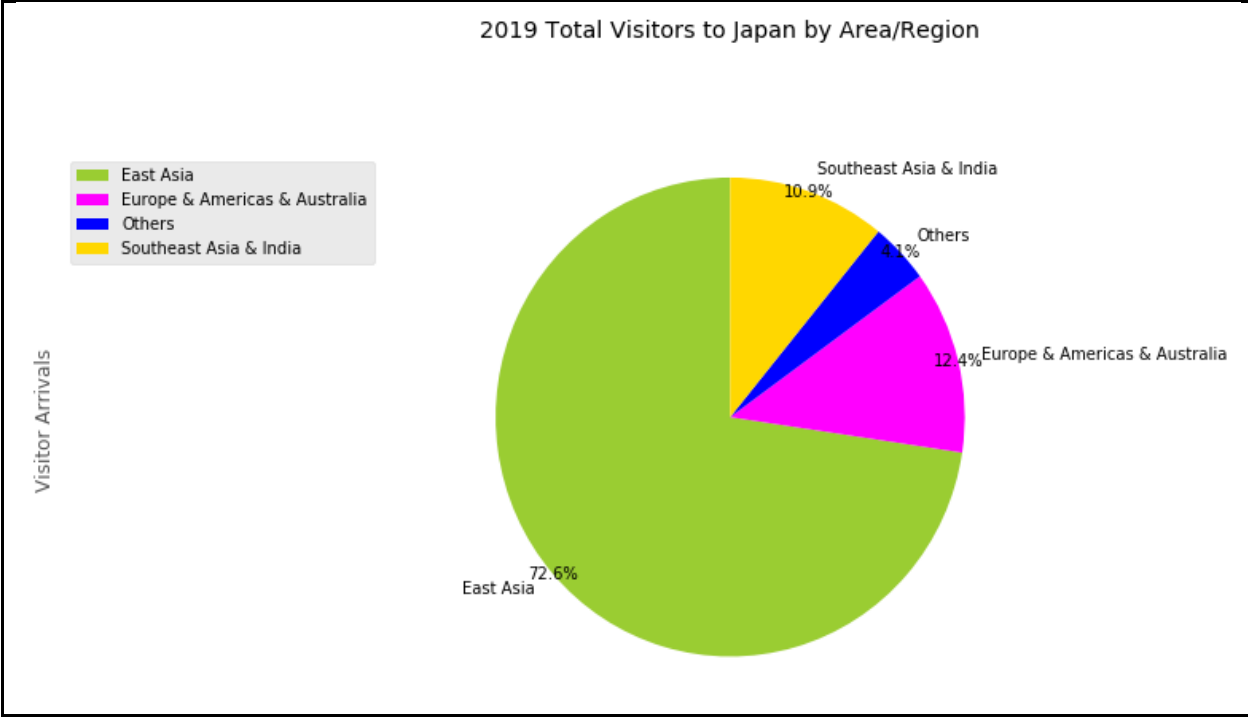
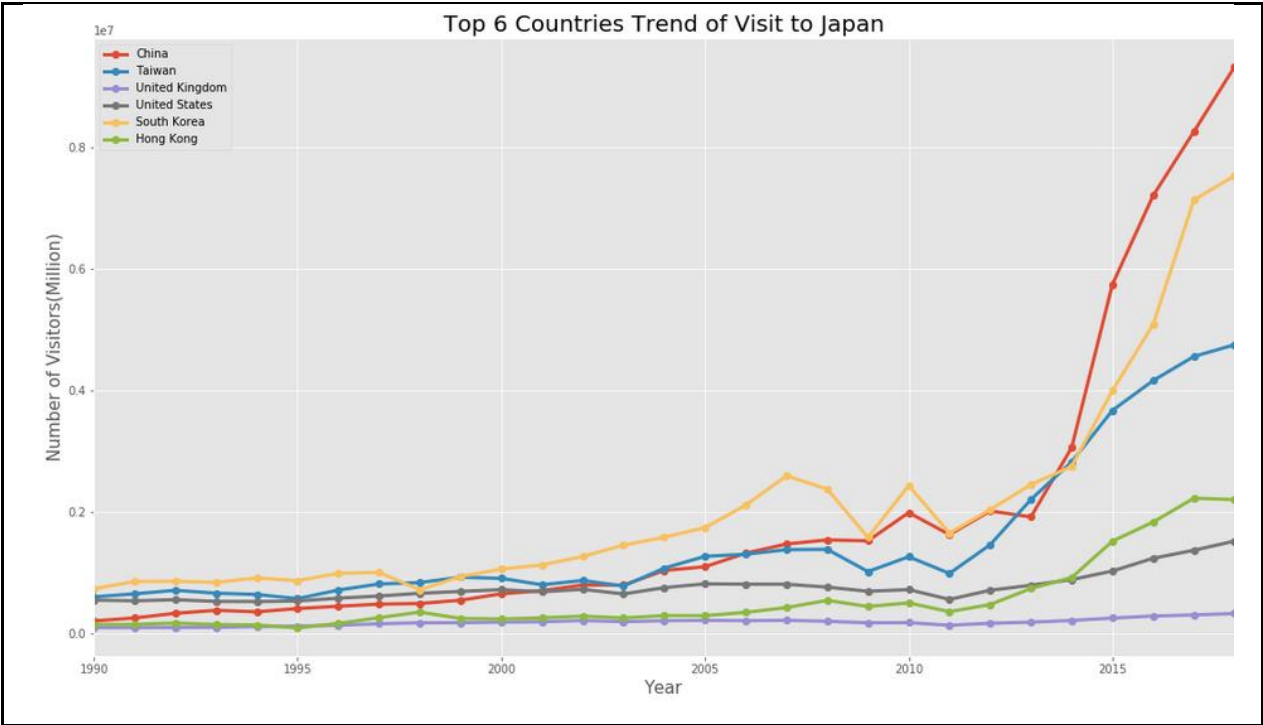Figure 2: Total Visitors to Japan by Region in 2019

Figure 3: Top 6 Countries Visiting Japan (1990-2018)

I have focused the next data to only South-East Asia and India. Southeast Asia & India are mostly an Islamic country or have high Muslim populations [Malaysia, Indonesia, Singapore, India]. Malaysia has Islam as the country's official religion and Indonesia has the largest Muslim populations in the world. Singapore and India have 14% of Muslim population in the country [source: Wikipedia]. The next table shows the spending trend of visitors from this region in 2019. Most visitors spend on accommodation. Shopping is on the second place with total of Y151,667.

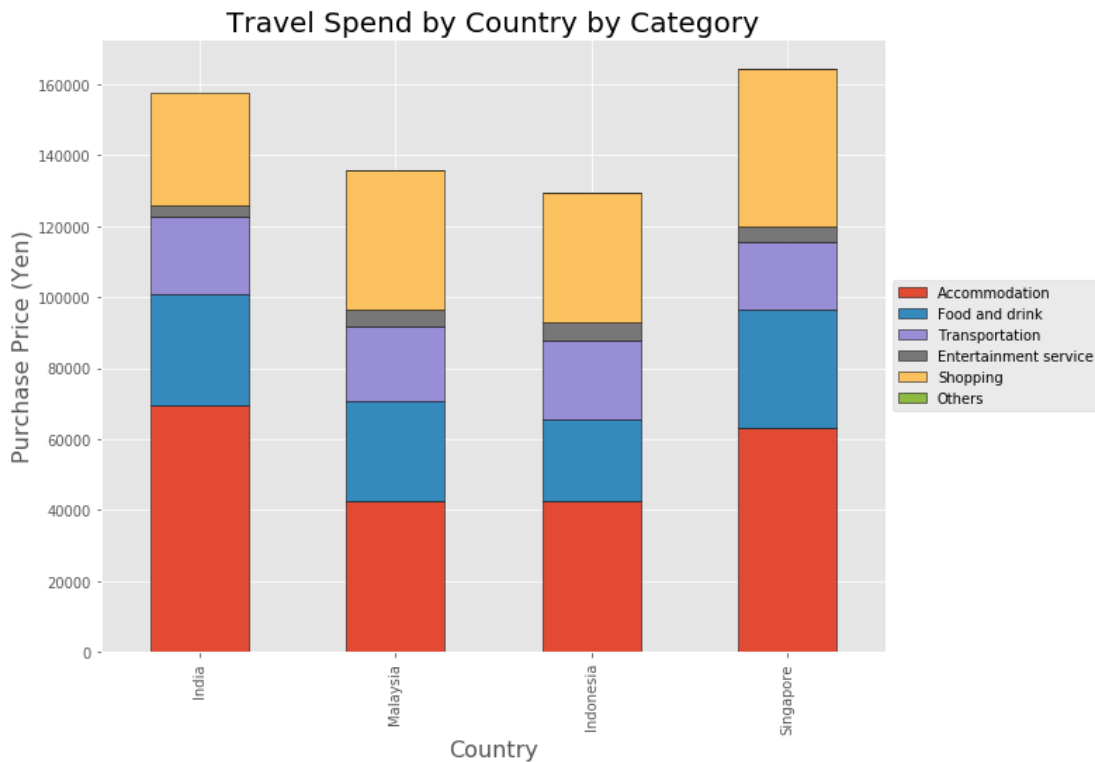| Category	India	Malaysia	Indonesia	Singapore
Accommodation	69506	42533	42593	63084
Food and drink	31212	28261	23084	33308
Transportation	21875	21106	22188	19005
Entertainment service	3268	4508	5098	4414
Shopping	31583	39303	36431	44350
Others	0	40	1	120

Table 2: Travel Spend by Country in 2019

Figure 4: Travel Spend by Country by Category, year 2019

Study shows that Tokyo is the most visited prefecture in Japan with 46.2% of the total visitors in 2017, followed by Osaka with 38.7% [figure 5]. For this assignment, I have focused on Shinjuku ward or borough where it is one of Tokyo's special ward. Tokyo has 23 special wards; each is a city itself. Shinjuku city is commonly referring to as a large entertainment, business and shopping district. For example, Shinjuku Station is the world's busiest railway station serving over 3.5 million people daily [source: Wikipedia].
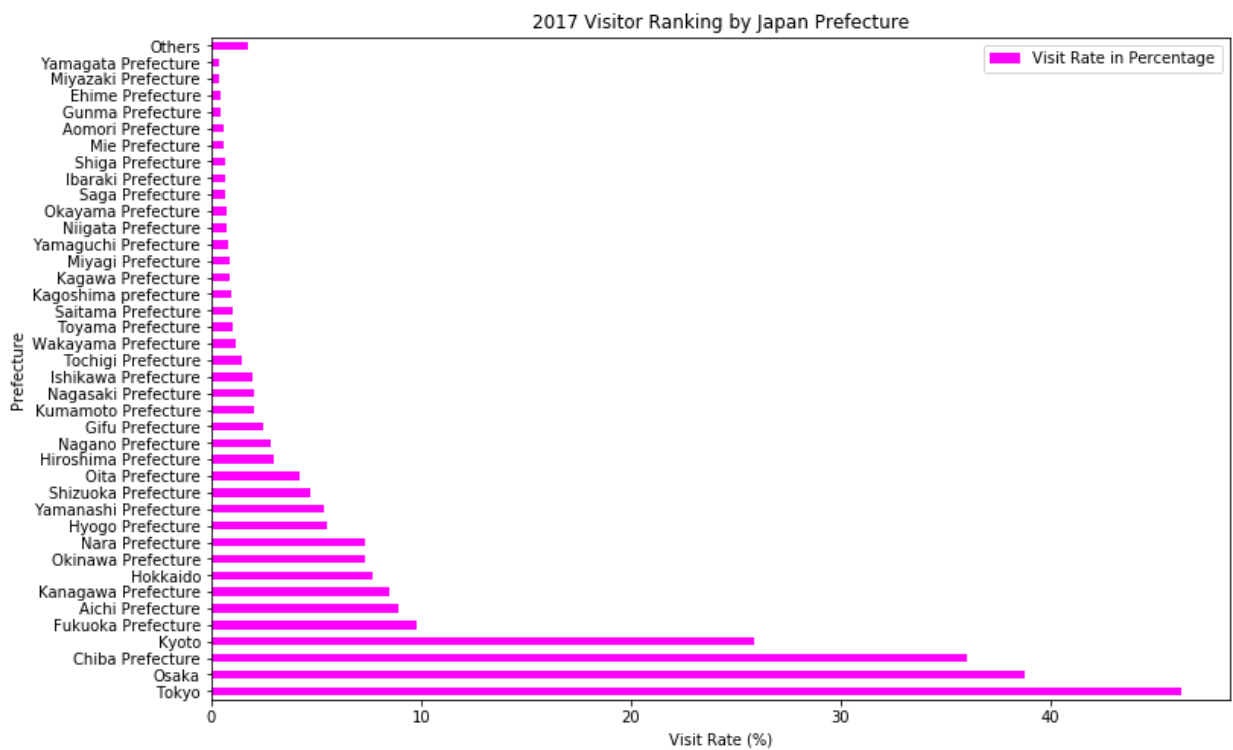

Figure 5: Visitors ranking by Prefecture in 2017

Figure 6: Map of Shinjuku

I used python **folium** library to visualize geographic details of Shinjuku and its neighborhoods. There are 99 neighborhoods in Shinjuku. I add the markers to each latitude and longitude values to get the visual as below:
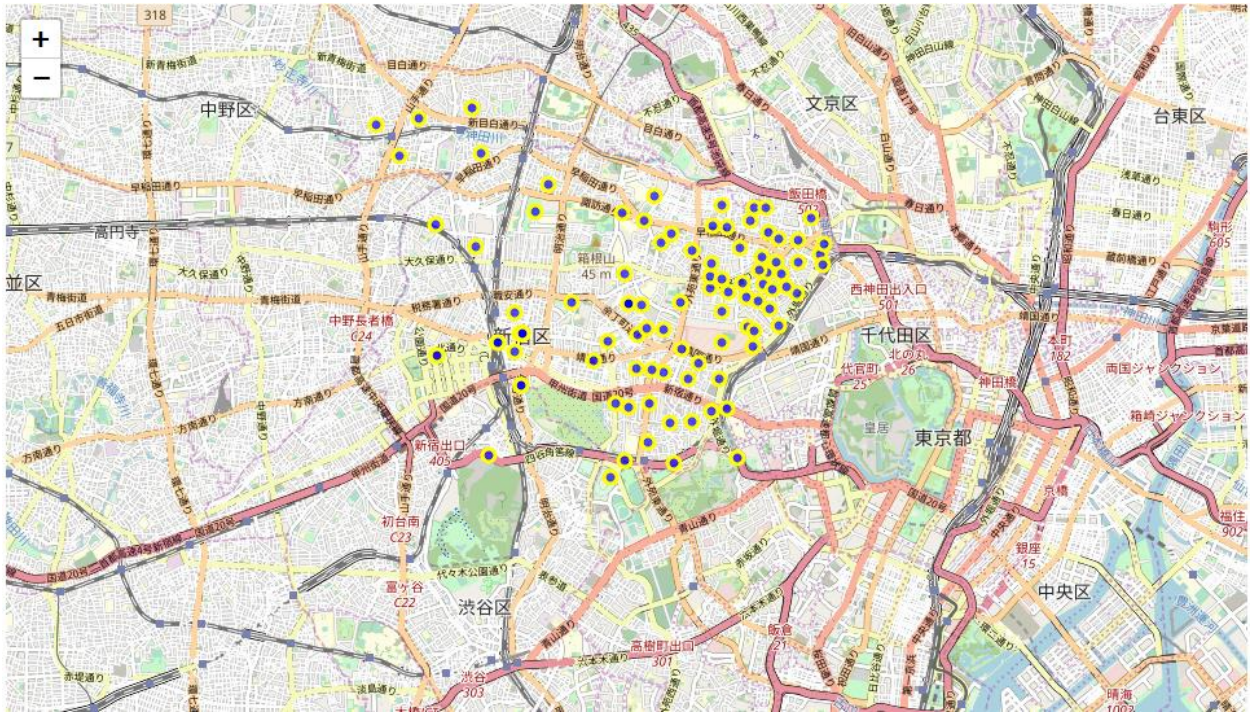

Figure 7: Map of Shinjuku and its neighborhoods.

I utilized the Foursquare API to explore the neighborhoods and segment them. I have set the radius to 700 meters for each neighborhood from their given latitude and longitude and limit the venue result to **100**. As many as **6726** venues were returned by Foursquare. From the total of 6726 venues found, 230 unique categories can be grouped together. The venue result (head 10) is as table below;

	Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
2902	shinjuku	35.697158	139.710247	ARTNIA	35.696069	139.708971	Theme Restaurant
2903	shinjuku	35.697158	139.710247	Tipness (ティップネス 東新宿店)	35.696944	139.708848	Gym / Fitness Center
2904	shinjuku	35.697158	139.710247	パン家のどん助	35.698388	139.710989	Bakery
2905	shinjuku	35.697158	139.710247	Kouei (ホルモン焼 幸永)	35.697895	139.706520	BBQ Joint
2906	shinjuku	35.697158	139.710247	新宿文化センター 大ホール	35.695880	139.709106	Theater
2907	shinjuku	35.697158	139.710247	bespoke hotel shinjuku (ビスポーク ホテル 新宿)	35.696068	139.706825	Hotel
2908	shinjuku	35.697158	139.710247	ラ・バゲット工房	35.694490	139.708694	Bakery
2909	shinjuku	35.697158	139.710247	合気会 合気道本部道場	35.699168	139.714389	Martial Arts Dojo
2910	shinjuku	35.697158	139.710247	無らい	35.693613	139.707953	Gay Bar
2911	shinjuku	35.697158	139.710247	Onsen Ryokan Yuen Shinjuku (温泉旅館 由 縁 新宿)	35.693073	139.711178	Hotel

Table 3: Shinjuku neighborhood venues

4.2. Findings on Halal Certified and Muslim-Friendly eatery places

Using Foursquare API, I used 'search' method and using search query 'halal' to find any halal venues and locations in Shinjuku within the same radius as previous data, 700 meter and 100 limits of findings. Result returned was 2 venues.

Next I lookup on Muslim-Friendly venues using search query 'vege' and 'seafood'. With 'vege', the result returned 6 while seafood returned 2 venues.

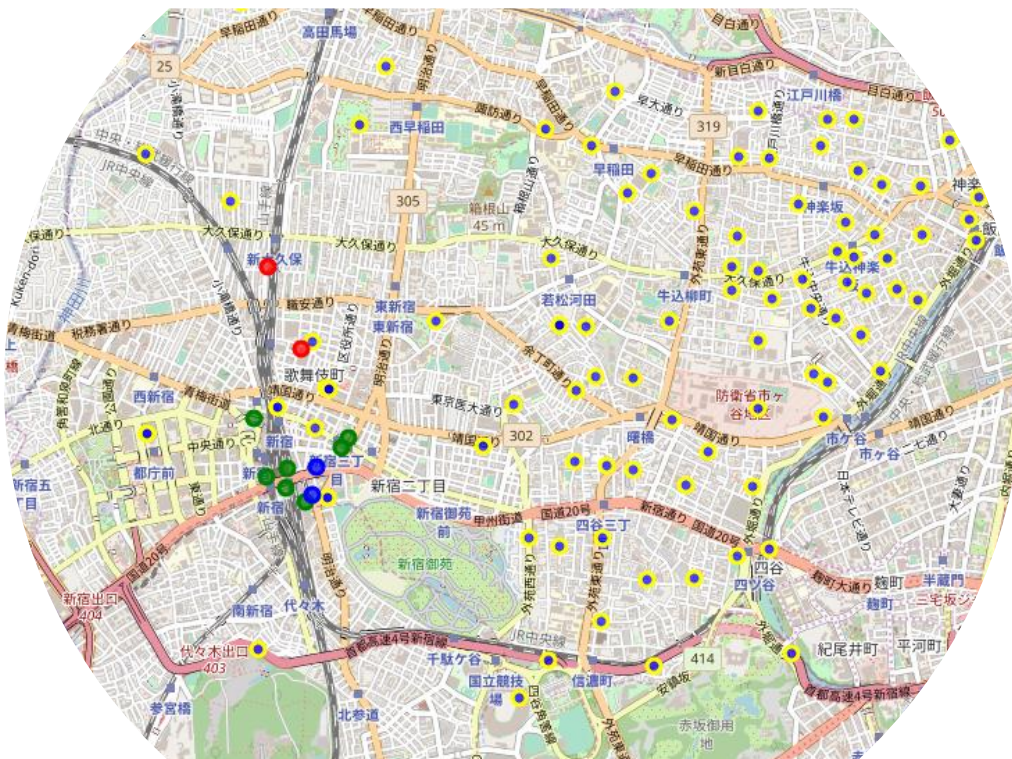I have mapped the findings superimposed on top of Shinjuku map with neighborhood markers.

Figure 8: Halal and Muslim-Friendly eatery venues in Shinjuku.

Legend:

Red Marker = **Halal** restaurant/market

Blue Marker = **Seafood** eateries

Green Marker = **Vegetarian** eateries

The result from Foursquare shows that Halal certified restaurant is very limited in Shinjuku area. Only 2 places were found, one is a restaurant, and another is a market. Seafood restaurant are also limited. Only vegetarian eateries/market have few to explore. Even though vegetarian restaurant or eateries are Muslim-Friendly place, Muslims will still be cautious not to eat at the place that serve or prepared the food with non-halal ingredient, eg alcohol or lard.

5. Findings

Studying from several top Japan travel websites [reference section], I make a conclusion of the landmark or places that are being recommended by many to be visited. Here are top 10 locations in Shinjuku;

	Top Location	latitude	longitude	Unnamed: 3
0	Robot restaurant	35.694300	139.702800	NaN
1	Shinjuku train station	35.689600	139.700600	NaN
2	Shinjuku Kabukicho Don Quijote	35.698599	139.702926	NaN
3	Gyoen National Garden	35.685200	139.710100	NaN
4	Central Park	35.689800	139.689700	NaN
5	Samurai museum	35.695500	139.703500	NaN
6	Golden Gai	35.693900	139.704600	NaN
7	Kabukicho Red district	35.693900	139.703400	NaN
8	Omoide Yokocho	35.691820	139.702748	NaN
9	Metropolitan building Observation deck	35.689600	139.692100	NaN

Table 4: Top 10 most recommended places in Shinjuku

I have mapped the geolocations of each attraction place and save them under a csv file. The csv file is then exported to Watson studio. Using Folium, I have generated a map to places the locations. The map is then superimposed on top of Shinjuku map with Halal and Muslim-Friendly markers.
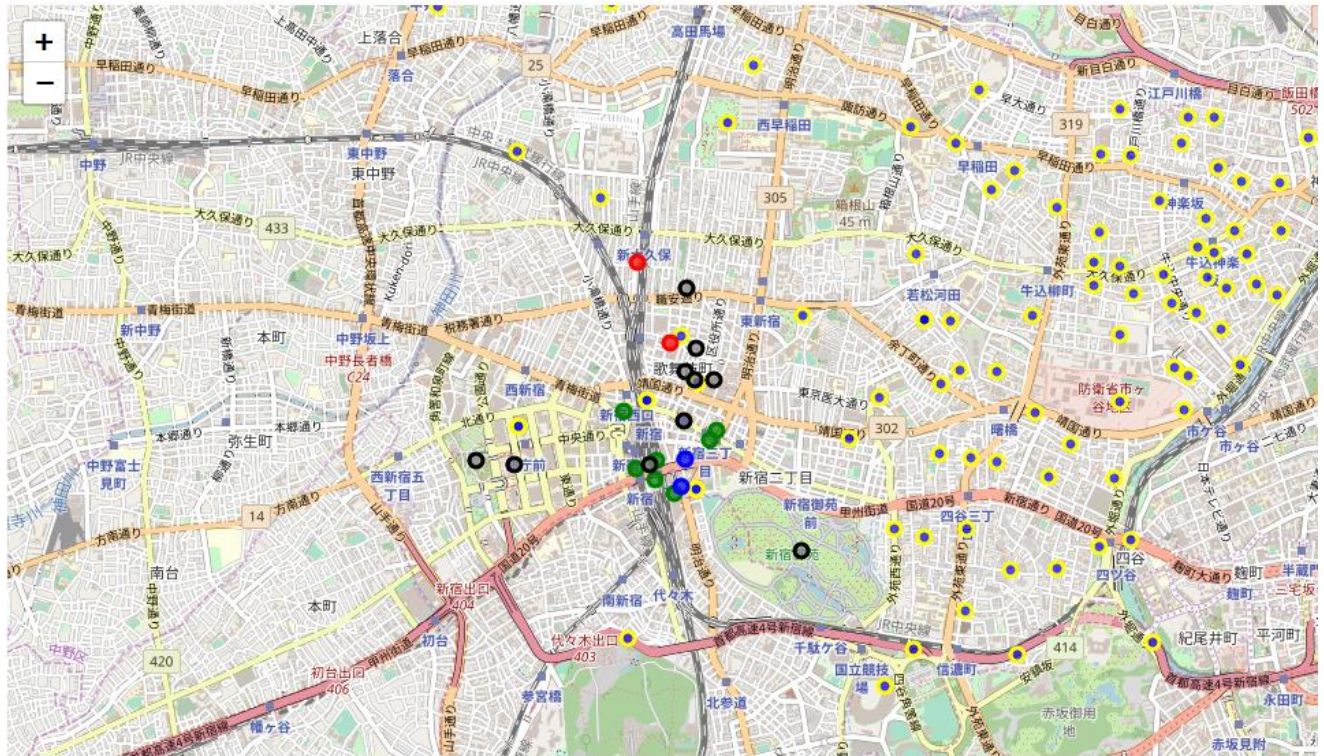
Figure 9: Halal and Muslim-Friendly markers with Top 10 attractions in Shinjuku
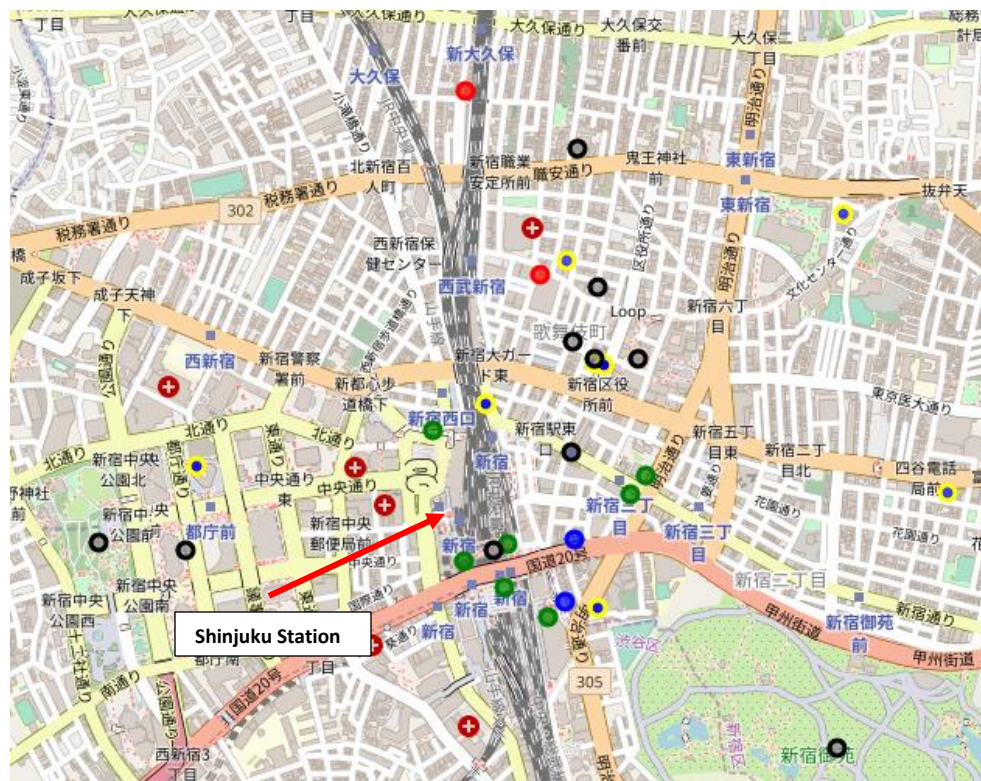

Figure 10: Zoom of Figure 9

6. Discussion

Japan is my favorite travel destination. With the vast transportation systems, unlimited choice of shopping, entertainment, and historic preserved places, I can't seem to compare Japan to other countries that I have visited. Everything is so convenient even when you are with small children. The people are polite, friendly and everywhere is clean. They have invented a small, littlest important thing that we always ignored, like a cupholder next to ATM machines, or baby buckled sit in every toilet (even in men's), or hot canned coffee in vending machine during winter, or a row of unique umbrella holder at every door of their markets. Even their pen is so innovative! Of all the positive points given, one thing about Japan that I will give a low rating; **Halal eatery place**.

This is supported by the findings above. We can see that Halal certified eatery places are very limited. They are also quite far from the top attraction place or landmark in Shinjuku. Also, most of the Muslim-Friendly eatery and marketplaces are centralized near the Shinjuku Station. Most of the top attractions are scattered around, and we see that almost none have Halal certified or Muslim-Friendly eateries nearby. Hence making it difficult for Muslims travelers or tourists to get lunch or dinner after visiting those places.

According to reports from Mastercard-Crescent Rating in 2017, the key drivers to Muslim travel growth in Japan which some of them are, travel Visa regulations for countries in South-East Asia has been relaxed in 2013-2014, increasing of international students, increase awareness of the opportunity by Japanese businesses, Tokyo 2020 Olympics, and the increase of Halal food availability. Although it has been increased in Japan, it was expanding steadily, where around 800 local restaurants promoted themselves as Muslim-Friendly, however only 150 are with Halal certification.

7. Conclusion

Muslim travelers globally will reach to 156M in 2020 where the travel expenditure will reach to USD 220 Billion. It is also projected that total Muslim travel expenditure will reach USD 300 Billion by 2026. With this much figures, Tokyo at least, can take advantage of this situation by locating more Halal certified eateries and diners at nearby attraction or landmarks and provide services such as prayers room, and Muslim-Friendly hotels.

Please note, this study has obtained the data using Foursquare API and using Folium to generate the map. Halal certified eateries might be more than what was generated by Foursquare.

8. Reference:

https://www.geopostcodes.com/Shinjuku_ku

https://www.address-zipcode.tokyo/shinjuku-ku.html

https://www.nippon.com/en/

https://statistics.jnto.go.jp/en/

https://www.nippon.com/en/japan-data/

https://nominatim.openstreetmap.org/search.php?q=tokyo&polygon_geojson=1&viewbox=

https://www.latlong.net/convert-address-to-lat-long.html

https://simple.wikipedia.org/wiki/Special_wards_of_Tokyo

[Top Japan Travel blog/website]

https://www.neverendingvoyage.com/things-to-do-in-shinjuku/

https://www.youcouldtravel.com/travel-blog/the-best-10-things-to-do-in-shinjuku

https://www.tripadvisor.com.my/Attractions-g1066457-Activities-Shinjuku_Tokyo_Tokyo_Prefecture_Kanto.html

https://tokyocheapo.com/entertainment/10-free-things-shinjuku/

https://jpninfo.com/28821

https://www.japan-guide.com/e/e3011.html