Indian Restaurants for Tokyo 2021 Olympics

1. Introduction

1.1 Problem statement

With Tokyo 2021 Olympics fast approaching, many Indians are expected to visit Tokyo, Japan to cheer for Team India. Since Olympics is a month-long entertainment, visitors generally prefer to stay at least for a week. This scenario demands them to be equipped with suitable eating options because Indian and Japanese food cultures are two different ends of the spectrum. Here the goal is to find a cluster of areas in Tokyo where in Indian restaurants have good presence.

1.2 Background

Due to COVID-19 pandemic, Tokyo Olympics which was scheduled to be held in 2020 is postponed to 2021. Olympics and Paralympics will be conducted in 40 venues which are grouped into 2 zones. 'The heritage zone' commemorates the grand entry of Olympics to Japan (and Asia) in 1964. 'Tokyo bay zone' is to showcase modern advancement of Japan. Olympic village is built right at the middle of both for easy mobility. Notwithstanding a lack of clarity about effectiveness of Corona vaccines, newly elected PM, his government and people of Japan are confident about hosting the prestigious event in 2021 in a full-fledged manner. Let's keep our fingers crossed and trust the mighty Japanese.

Greater Toronto, which Tokyo a part of is the most populous metropolitan area in the world with a whopping 3.7 crore population! Searching for a rare spot like Indian restaurant in Tokyo will make Tokyo look like an unnavigable maze to anyone with or without GPS. So, it is advisable to plan accordingly and stay in an area where a lot of Indian restaurants are available.

1.3   Target Group

- For those Indians who crave for Indian dishes wherever they go and with whatever other options available.
- For people whose tummy and tongue don't tolerate meaty East Asian food.
- For people from any countries, who want to kill their cravings without killing anything else, as Indian restaurants are vegetarian friendly
- For Indians who want peers to discuss Indian chances when others will be talking about Japan, China, South Korea, US etc.

2. Data

2.1   Wikipedia

A Wikipedia page containing data about special wards (neighborhoods) in Tokyo will be scaped using BeautifulSoup. Data will be wrangled and made suitable for processing. Basically, they contain latitudes and longitudes which are passable while hitting required endpoints for more data.

Source: https://en.wikipedia.org/wiki/Special_wards_of_Tokyo

2.2   Foursquare API

Foursquare is a social location service which generates data from crowd-sourcing. Foursquare API will be used to fetch data about Indian restaurants (venues) in the proximity of Tokyo's wards. A developer or sandbox account will suffice for calling the API.

3. Methodology

For this use case, I found Coursera's approach of fetching the popular venues and filtering them down to be irrelevant. When I had ran 'explore' queries, I did not get much Indian Restaurant recommendations. It is rightly so because they are often less visited and less reviewed when Chinese and Italian restaurants are available which match Japanese interests. It can be called as 'Curse of Majority' in social terms. Additionally, my goal was to quantify the Indian restaurants so it was futile for me to explore popular venues.
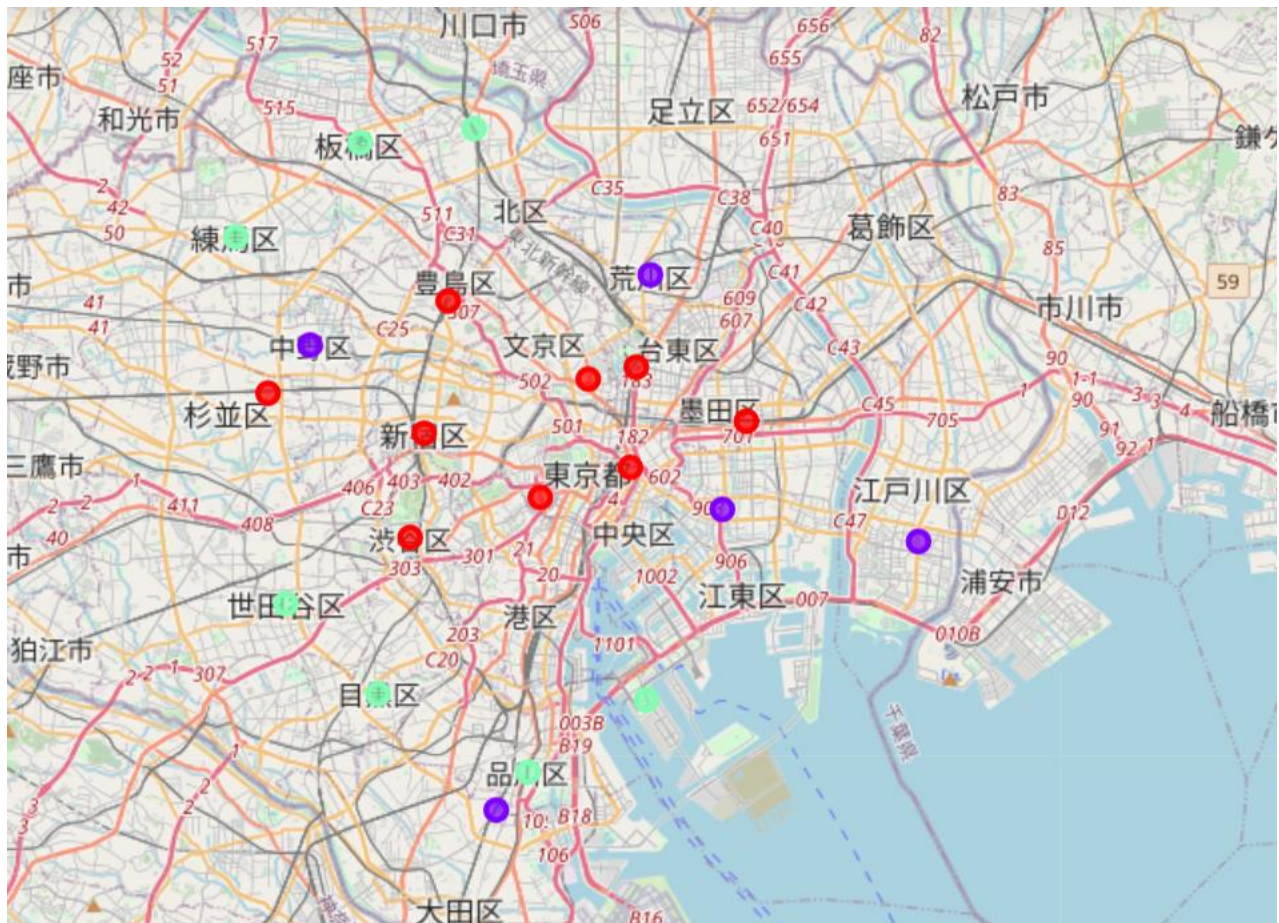
If you closely read the problem statement given by Coursera, it wants us to leverage Foursquare's location data but it does not mandate us to use machine learning. In fact, it is suggesting us to be as innovative as we can. Considering this factor, I did not use machine learning at all. Instead

Foursquare's advanced queries were used and venues were clustered based on a simple rule. This methodology is in agreement with the fact that a data scientist's job is not to build unnecessary complex models but rather to solve the problem in an easiest possible way.

4. Challenges

Only challenge was to deal with Japanese names with I being an Indian. Japanese nomenclature posed a little challenge since I am not accustomed to that. Nevertheless, it was only a matter of making use of MS-Excel sheets to organize and manage the names.

5. Results

An image representing clustered wards.

Tokyo's wards are grouped into 3 clusters based on availability of Indian restaurants as shown in the image.

- Cluster of wards characterized by spring green has least number of Indian restaurants (less than 17 each). Long distance from Olympic venues is only adding salt to the wound. Further, you can't leverage decreased food price too because it is not fully located in the outskirts either. It suggests us to strictly avoid these wards.

- Cluster which is represented by purple is somewhat okay with more than 17 authentic Indian Restaurants. Purple cluster has majority of wards in the bay area. This location leaves a lot to be desired with respect to other sightseeing options as most of the traditional Japanese venues are concentrated in the mainland. You are not going to Dubai and definitely you don't want to miss them.

- Third cluster depicted in red color solves both problems hands down. It is ideally located at the middle and houses more than 33 Indian restaurants per ward. These wards are highly recommended from an Indian's perspective. However, restaurants are dearer due to high population density and consequently a larger customer base.

6. Limitations

- Only 50 restaurant names were fetched from each ward because of Foursquare's limit for search query. But due to uniform variation of frequency between 0 to 50 and a smaller number of values reaching up to 50, its ill effects appear to be negligible.

- Logically, 2021 Olympics should be perceived as 'Japan Olympics' instead of 'Tokyo Olympics' because a good number of events will be conducted outside Tokyo (across Japan). Especially if you are from North Eastern India, you may have to travel from Tokyo because majority of football matches are conducted outside Tokyo. Indian restaurants located outside Tokyo are beyond the scope of this project. Nevertheless, it is not a big shortcoming because for long distance traveling Japan has none other than Shinkansens.

7. Conclusion

Japanese are considered as least harmful people for Humans. The worst thing one can do in Japan is to cause unnecessary inconvenience to others which is largely looked down upon in the island nation. Japan is planning to deploy a record number of robots to assist people during the event. They may not help you because some fishes, dashi and broths are considered as vegetarian in Japan and chances are miniscule that robots will be programmed for assisting 'Indian kind of vegetarians'. These factors necessitate above analysis prior to booking a place of residence. Quality of these Indian restaurants are not taken into account because of two reasons. One, getting reviews data is a premium call for Foursquare API. Second, reviews are dominated by Japanese and other customers who are less informed about Indian dishes, tastes and variants. Further, above analysis is also suitable for vegan dishes due to their hair thin difference between vegetarian counterparts thanks to little use of dairy in Japan.