

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 the 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 wherein Indian restaurants have a good presence.

1.2 Background

Due to the COVID-19 pandemic, the Tokyo Olympics which was scheduled to be held in 2020 is postponed to 2021. The Olympics and Paralympics will be conducted in 40 venues which are grouped into 2 zones. 'The heritage zone' commemorates the grand entry of the Olympics to Japan (and Asia) in 1964. 'Tokyo bay zone' is to showcase the modern advancement of Japan. Olympic village is built right in the middle of both for easy mobility. Notwithstanding a lack of clarity about the effectiveness of Corona vaccines, the newly elected PM, his government and, the 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 an 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 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 country, 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 is scraped using BeautifulSoup. Data are 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 that generates data from crowd-sourcing. Foursquare API is used to fetch data about Indian restaurants (venues) in the proximity of Tokyo's wards. A developer or sandbox account is sufficient for calling the API.

3. Methodology

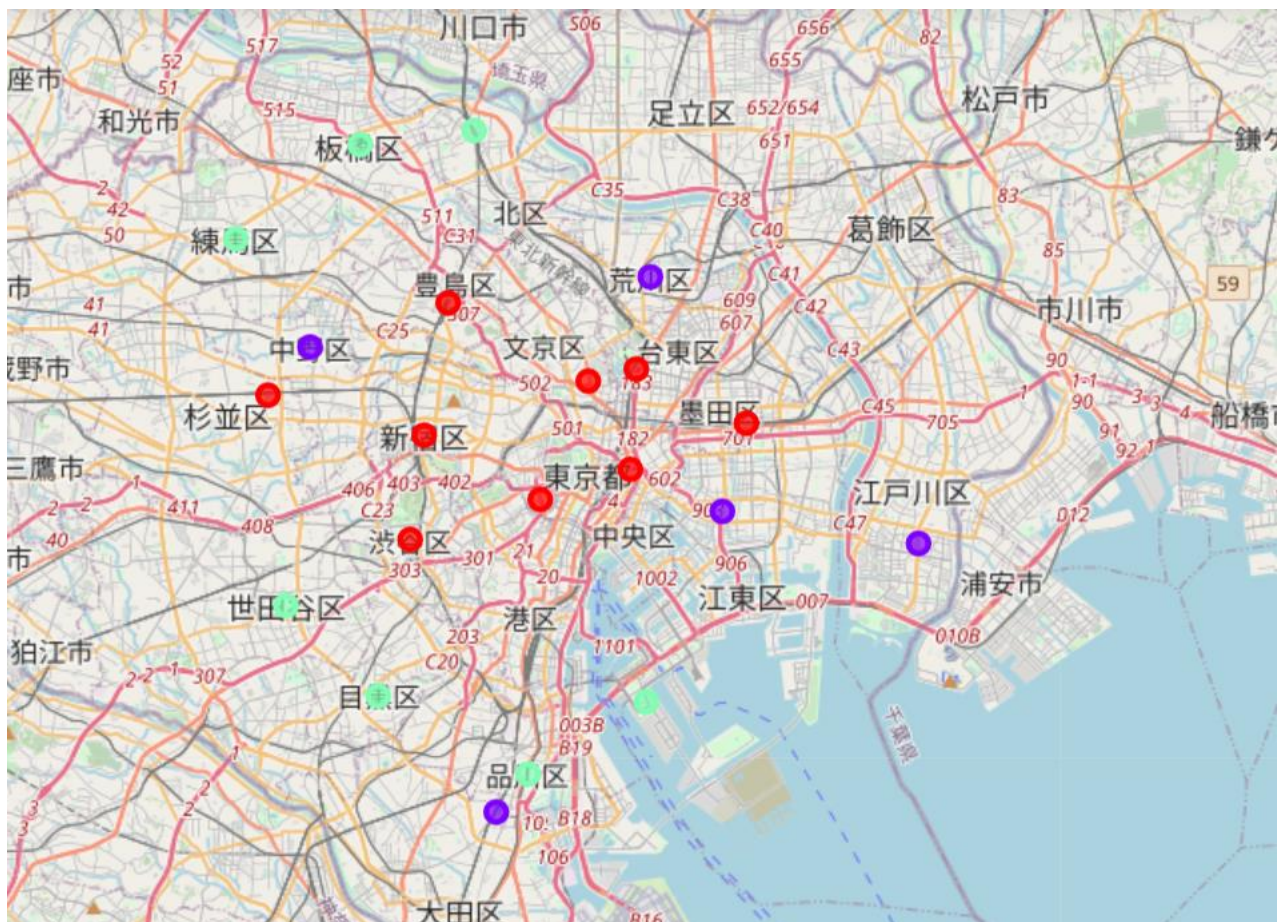
For this use case, I found Coursera's approach of fetching the popular venues and filtering them down to be irrelevant. When I had run 'explore' queries, I did not get more Indian Restaurant recommendations. It is rightly so because they are often less visited and less reviewed when Chinese and Italian restaurants are available which match Japanese interests. It can be called as 'curse of the majority' in social terms. Additionally, my goal is to quantify the Indian restaurants so it is 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 we be as innovative as we can. Considering this factor, I did not use machine learning at all. Instead, Foursquare's advanced queries are used and venues are 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 the easiest possible way.

4. Challenges

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

5. Results



An image representing the clustered wards.

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

- The cluster of wards characterized by spring green has the least number of Indian restaurants (less than 17 each). Long-distance from Olympic venues is only exacerbating the problem. Further, one can't leverage decreased food prices too because it is not fully located in the outskirts either. It suggests one strictly avoid these wards.
- The cluster which is represented by purple is somewhat okay with more than 17 authentic Indian Restaurants. The purple cluster has a 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. They are not going to Dubai and definitely, they don't want to miss them.
- The third cluster depicted in red color solves both problems hands down. It is ideally located in 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 are fetched from each ward because of Foursquare's limit for the 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, the 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 they are from North-Eastern India, they may have to travel from Tokyo because a 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 Shinkansen.

7. Conclusion

Japanese are considered as least harmful people for humankind. 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 them because some fishes, dashi, and broths are considered vegetables in Japan and chances are minuscule that robots will be programmed for assisting 'Indian kind of vegetarians'. These factors necessitate the above analysis prior to booking a place of residence. The quality of these Indian restaurants is not taken into account because of two reasons: First, 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, the 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.