

Survey Neighborhoods in Tokyo for Promising Business Opportunities

Nazmul Ahsan

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 - ✓ The merit for a study on investment potentials based on culinary tourism and location of Olympic stadium
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Background

- **It is the first time in history** that the Olympic and Paralympic Games, due to take place in Japan in July-August 2020, have been postponed, following the Coronavirus pandemic outbreak.
- The country's economy will be hugely impacted by both events. **It is inevitable** that various industries Japan, from travel to televisions, will experience a difficult time
- Yet, the population of greater Tokyo is as large as **40 Millions** (To be precise, 38.14 Millions as of and it creates a huge consumer market. Meanwhile, The new date for the Olympic is set to end of 2021. Any survey based on culinary tourism and investment potentials on restaurant/food/beverage businesses deserves merits for a study.

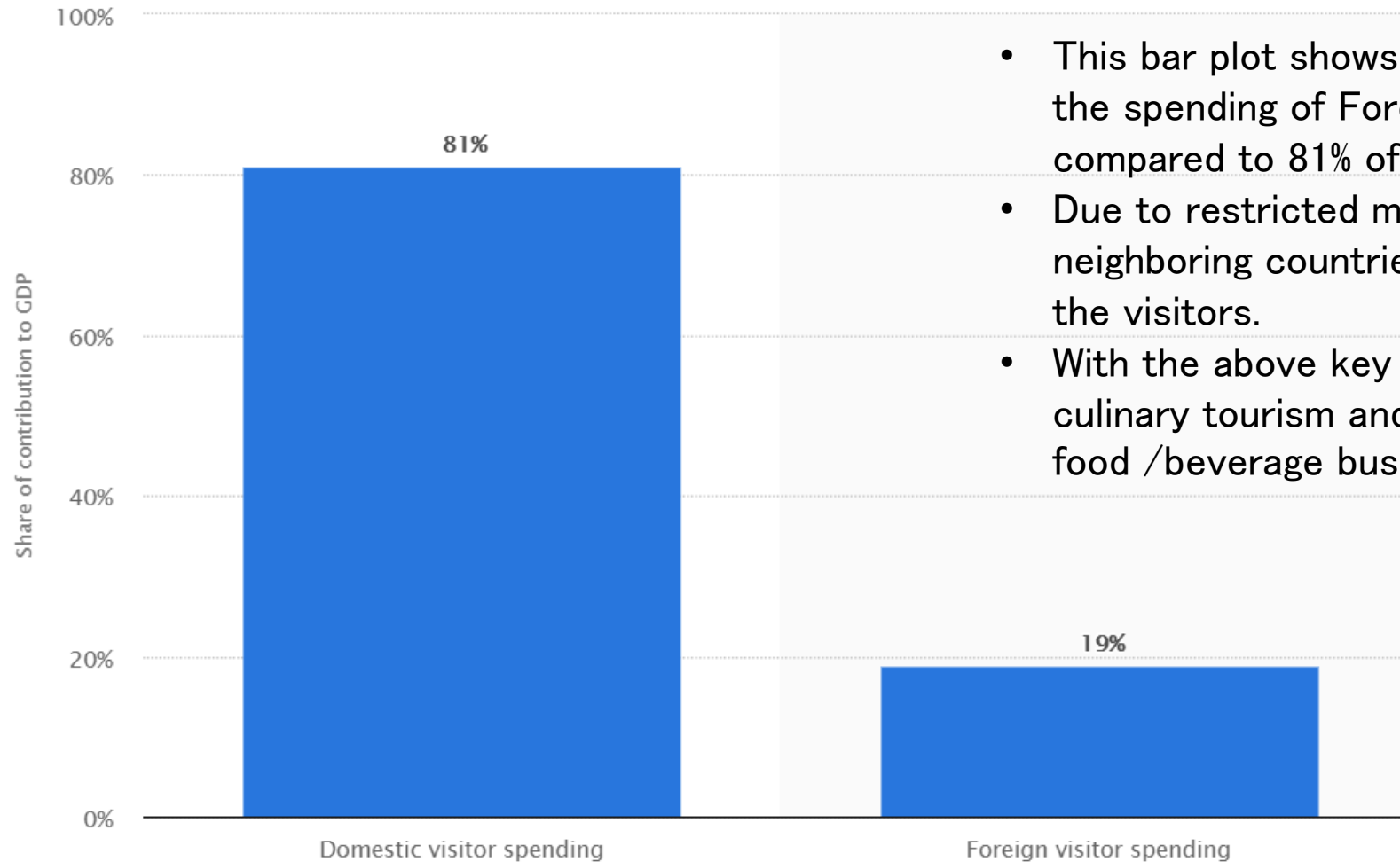
Domestic and foreign tourism contribution to Japanese GDP 2019

Published by [Statista Research Department](#), Oct 13, 2020

In 2019, domestic travel spending generated around 81 percent of direct travel and tourism GDP compared to 19 percent of foreign visitor spending.

Travel and tourism contributed just over ten percent to the Japanese gross domestic product.

Distribution of domestic and foreign tourism's contribution to GDP in Japan in 2019



- This bar plot shows that there remains a huge potential on the spending of Foreign visitor spending which is only 19% compared to 81% of the domestic visitors.
- Due to restricted mobility due to COVID-19, visitors from neighboring countries are expected to be the majority of the visitors.
- With the above key issues in account, any survey based on culinary tourism and investment potentials on restaurant / food /beverage businesses deserves merits for a study.

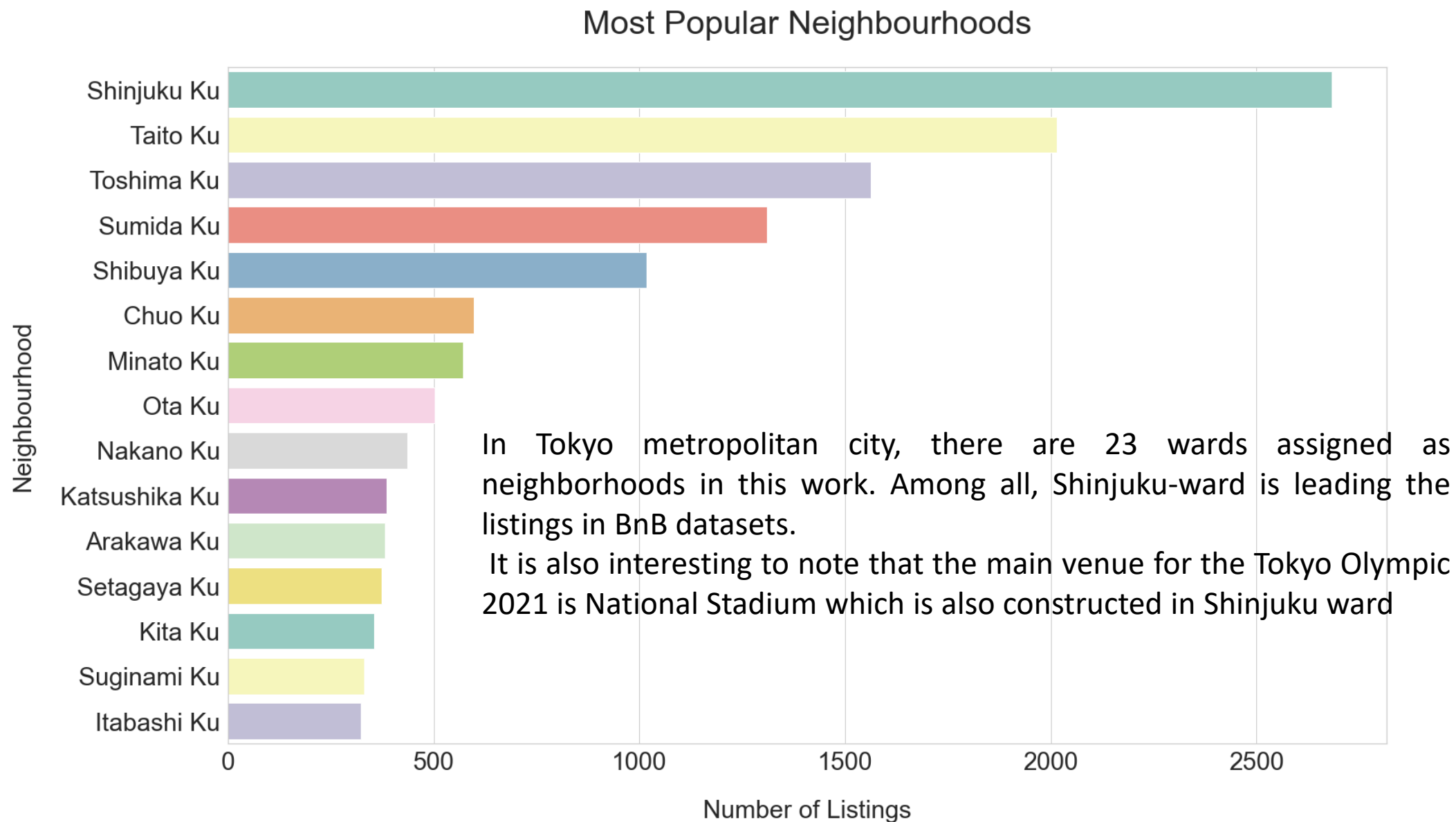
Data: Context to the problem and data source

- **Problem:**
Survey Neighborhoods in Tokyo for Promising Business Opportunities
- **Context and Source of datasets**
 - (1) **The first part** of the project focus on sectioning **Airbnb datasets** on Neighborhoods in Tokyo, and survey the surroundings for potential Business Venues
 - **Source:** available on Inside AirBnB (<https://insideairbnb.com/get-the-data.html>)
 - (2) **The second part** of the project focus on the **Population Dataset** from a wikipedia in order to merge it to the airbnb dataset for in-depth analysis.
 - **Source:** https://en.wikipedia.org/wiki/Special_wards_of_Tokyo.
 - (3) **The third and final part** focus on **FourSquare dataset** analysis to carry on key analyses on the specific promising business.
 - **Source:**
https://api.foursquare.com/v2/venues/explore?client_id={}&client_secret={}&ll={},{}&v={}&radius={}&limit={}'.format(CLIENT_ID, CLIENT_SECRET, latitude, longitude, VERSION, radius, LIMIT)

Methodology

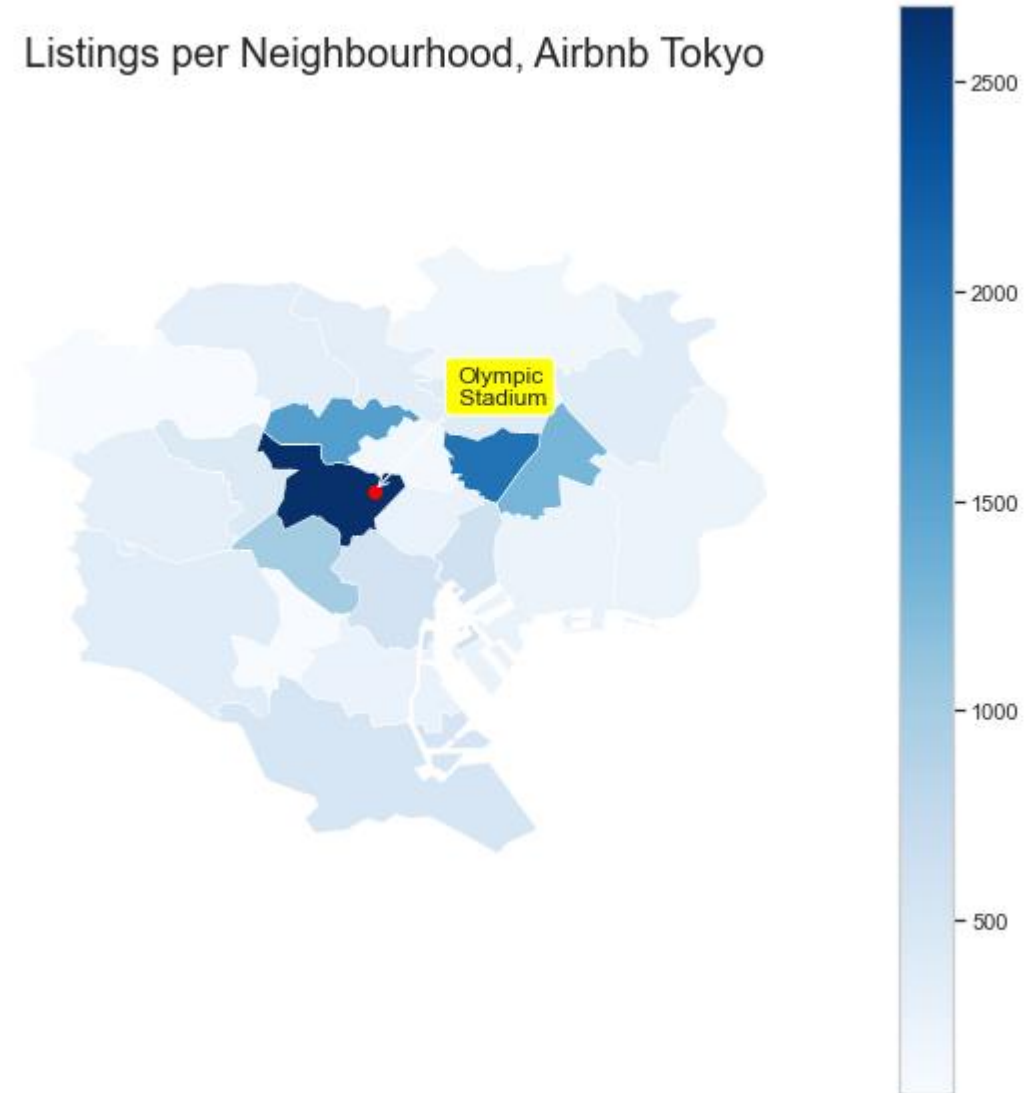
- (1) **The first part** of the project focus on sectioning **Airbnb datasets** on Neighborhoods in Tokyo, and survey the surroundings for potential Business Venues
- **Statistical analysis and data visualization with bar chart and choropleth maps:** (1) Survey popular neighborhoods in terms listings and average price of the AirBNB hotels. (2) Analyze neighborhoods in terms of the distance from the main venue of Tokyo Olympic 2021.
- (2) **The second part** of the project focus on the **Population Dataset** scrapped from a wikipage using BeautifulSoup tool in order to merge it to the airBnB dataset for in-depth analysis.
- **Statistical analysis and data visualization with bar chart and choropleth maps:** (1) Survey neighborhoods in terms population. (2) Analyze the neighborhoods in terms of the distance from the main venue of Tokyo Olympic 2021. The prospective neighborhood should have a large population to make the business scalable, and to sustain its growth after the Olympic is over.
- (3) **The third and final part** focus on **FourSquare dataset** analysis to carry on key analyses on the specific promising business.
- **Statistical analysis and data visualization with bar chart and choropleth maps:** Count and compare the number of restaurants based on culinary categories. This will lead finding a potential location for investment on Restaurant Business with specific set of cuisines.

Results(1): Bar plot of Popular Neighborhoods in Tokyo

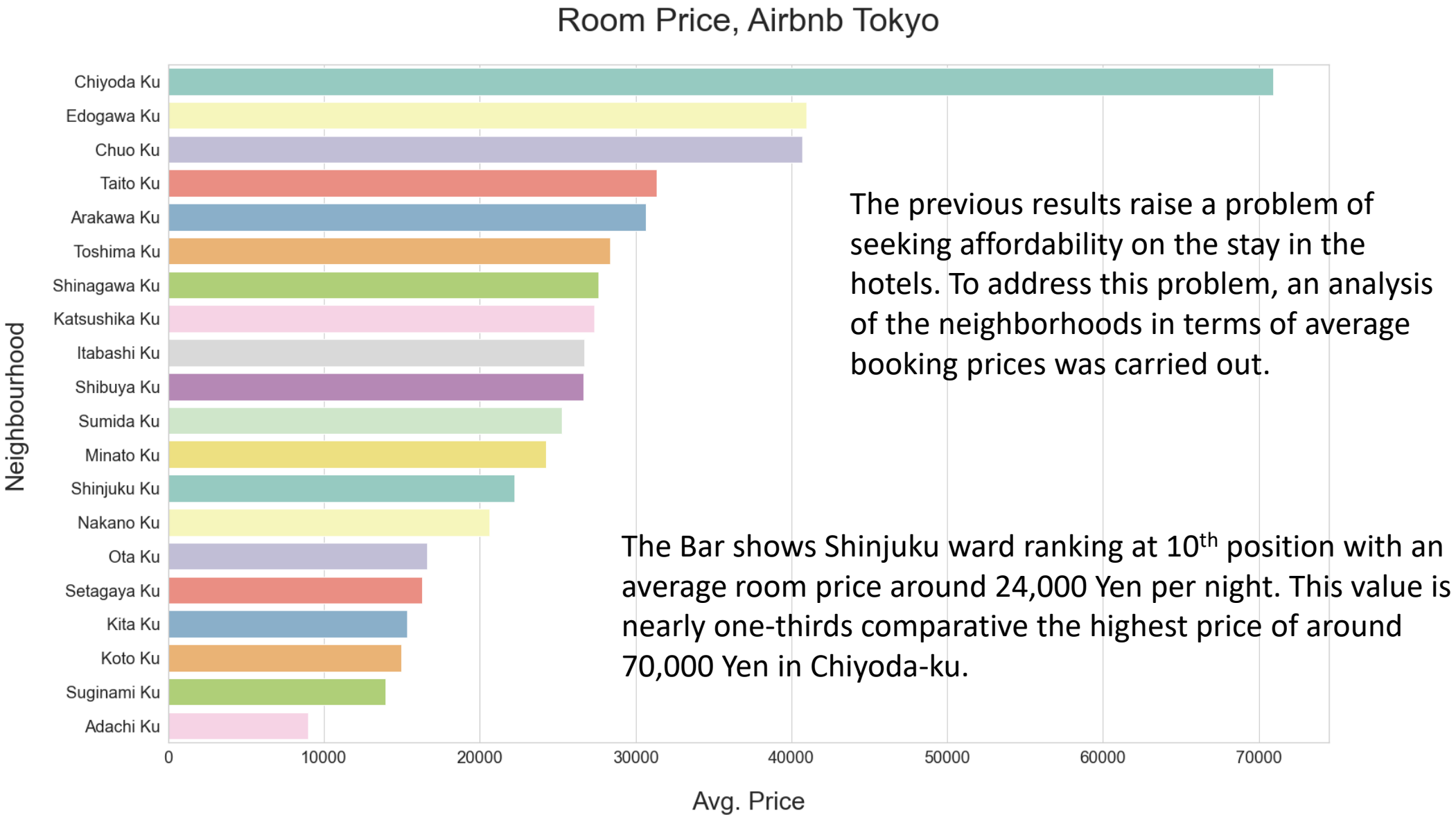


Results(2): Choropleth map of Popular Neighborhoods Popular Neighborhoods in Tokyo in terms of number of listings in AirBnB datasets

The choropleth show the most popular neighborhoods along with the location of Tokyo Olympic Stadium. The deeper the color in the blue color bar, the more number of listings of Airbnb hotels, and hence, reflects the popularity of the neighborhood



Results(3): Most Popular Neighborhoods in Tokyo in terms of average Room Price in AirBnB datasets



Results(4): Most Popular Neighborhoods in Tokyo in terms of average Room Price in AirBnB datasets

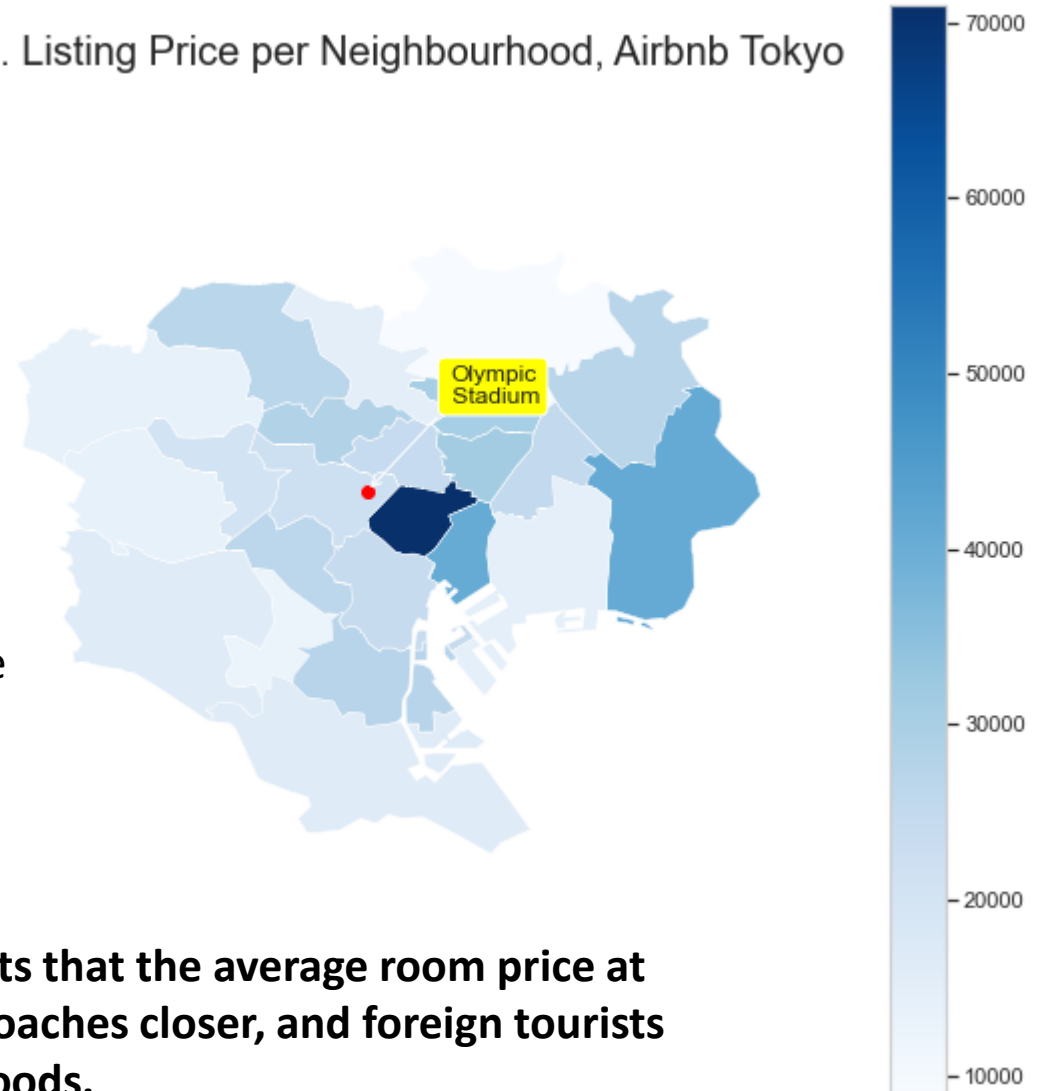
The choropleth map along with the location of Tokyo Olympic Stadium shows contrasting situation between Shinjuku and Chiyoda.

Now let you remind that the data analyzed here is based on the datasets until August 2020, which is the latest dataset available

If you notice that neighboring prices around Shinjuku-ward, the prices are even higher. An initial outcome of the above analysis is that the Shinjuku ward is a promising place for businesses in the ground of culinary tourism

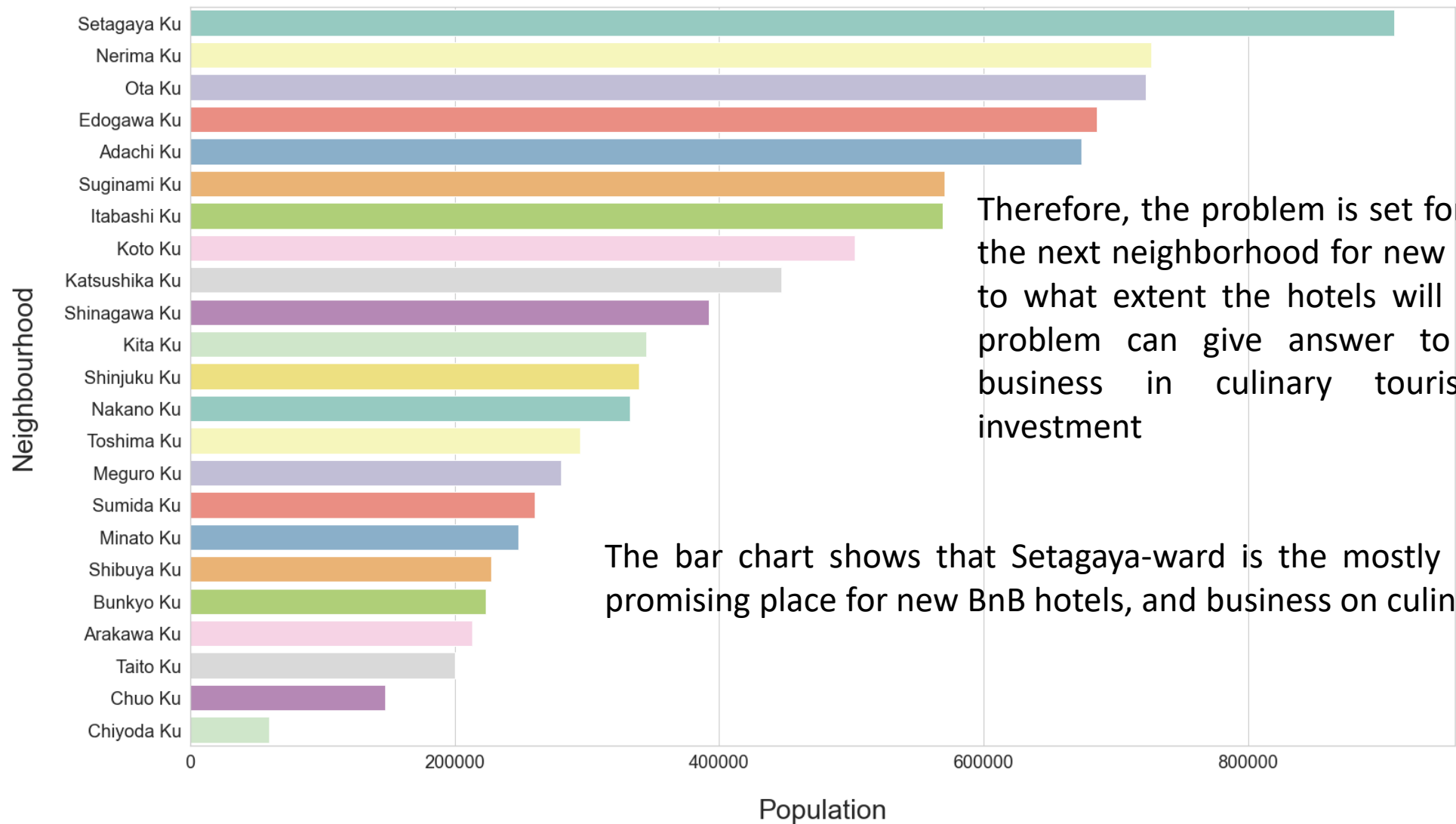
However, the above analysis equally suggests that the average room price at Shinjuku will go higher as the Olympic approaches closer, and foreign tourists will find affordable places in the neighborhoods.

Avg. Listing Price per Neighbourhood, Airbnb Tokyo



Results(5): Most Populated Neighborhoods in Tokyo

Population of Neighborhoods, Tokyo



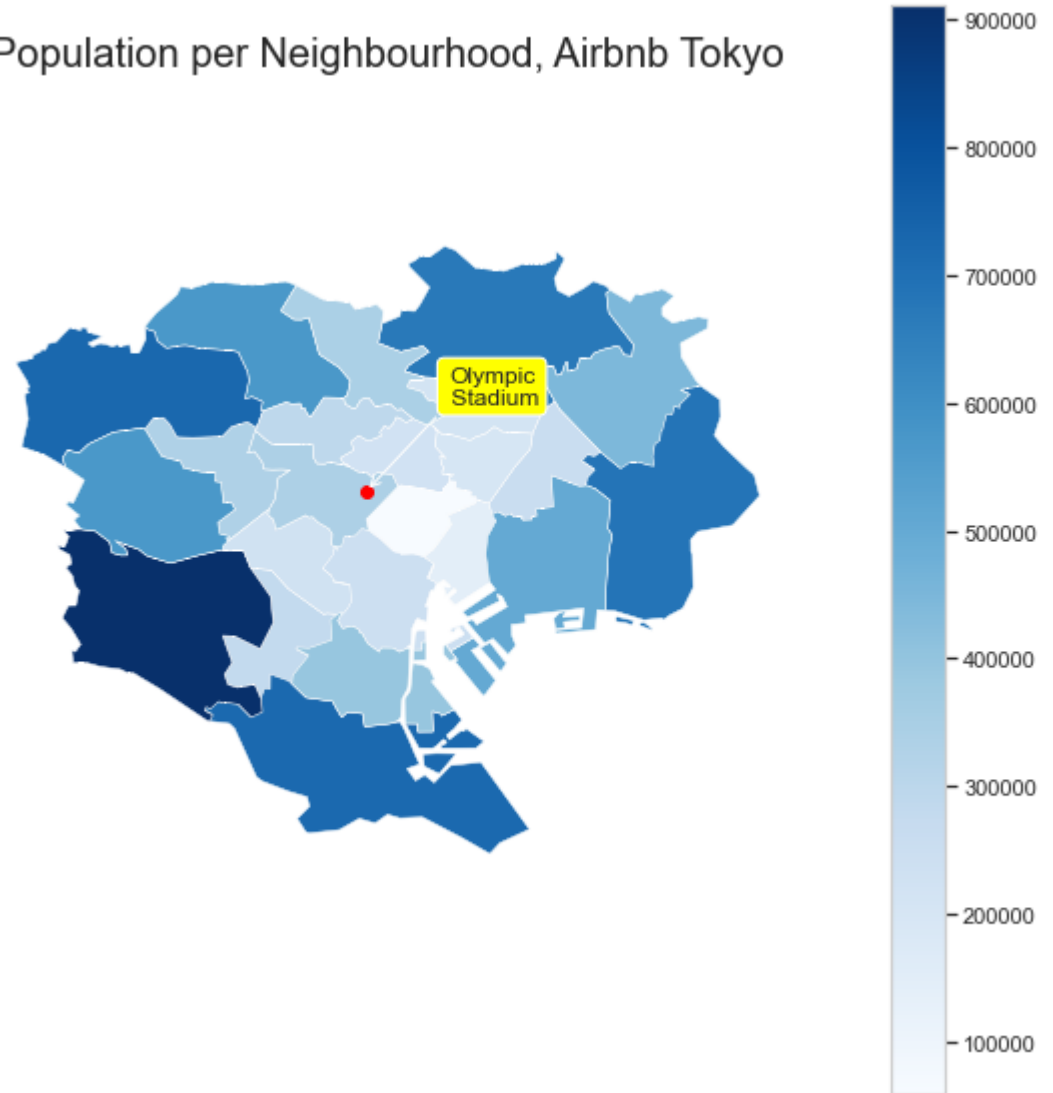
Therefore, the problem is set forth in analyzing who is the next neighborhood for new the Airbnb hotels, and to what extent the hotels will grow. Solution of this problem can give answer to potential venue for business in culinary tourism with affordable investment

The bar chart shows that Setagaya-ward is the mostly populated and hence, promising place for new BnB hotels, and business on culinary tourism.

Results(6): Most Populated Neighborhoods in Tokyo

The choropleth map shows that Setagaya-ward is the mostly populated and hence, promising place for new BnB hotels, and business on culinary tourism.

Population per Neighbourhood, Airbnb Tokyo

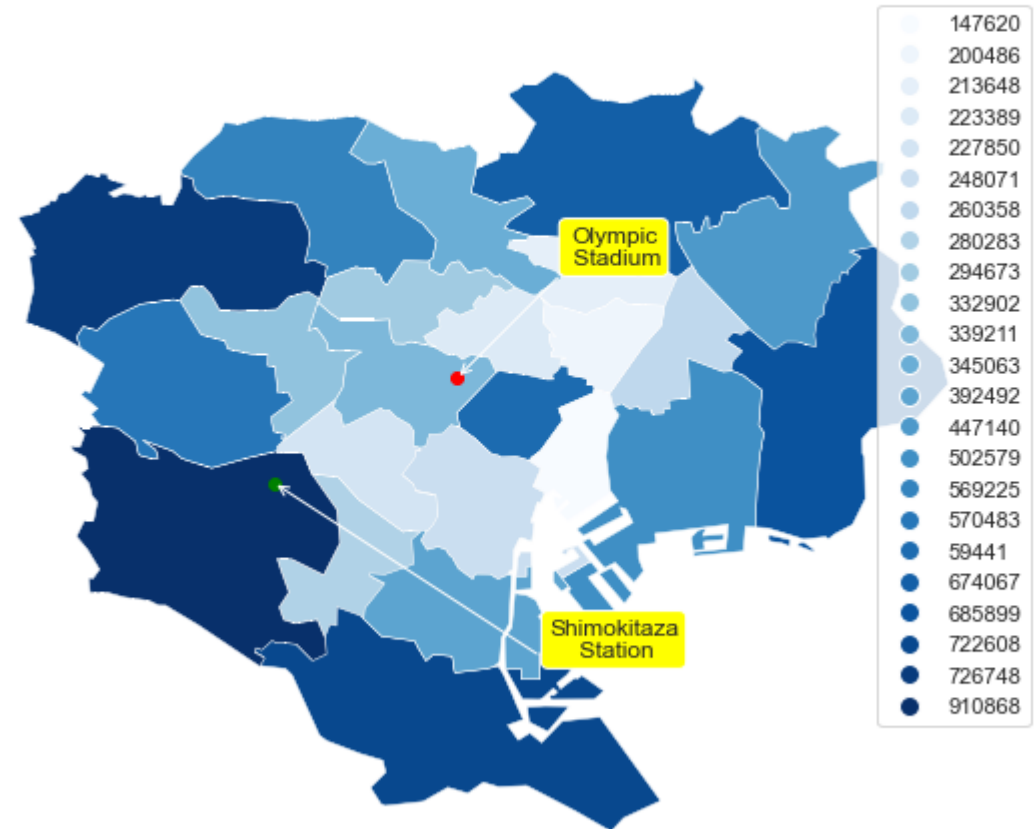


Discussion: Most Populated Neighborhoods in Tokyo

Population per Neighbourhood, Airbnb Tokyo

As listed in the official webpage of Setagaya-ward, there are 130 prominent Shopping arcades in Setagaya ward, and a quick analysis showed that Shimokitaza is the most nearest to the Olympic venue, as shown in the map.

The distance between locations of both the Olympic stadium and Shimokitazawa-station is around 5 kilometers.

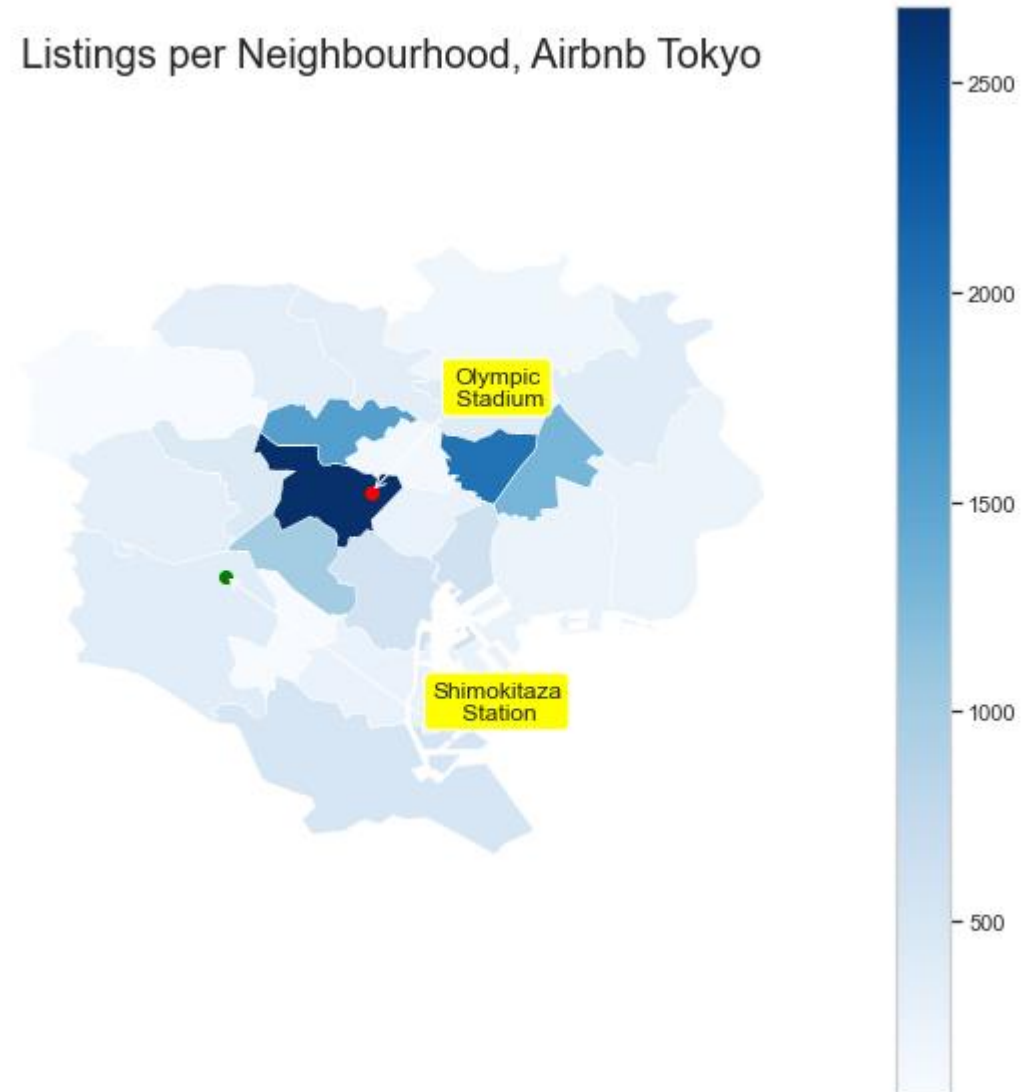


Discussion: Redrawing the two venues with reference to the number of listings in AirBnB datasets

The distance between locations of both the Olympic stadium and Shimokitazawa station is around 5 kilometers. While the number of listings are yet less.

Therefore, Shimokitazawa area is promising for new Airbnb hotels and culinary tourism.

Listings per Neighbourhood, Airbnb Tokyo

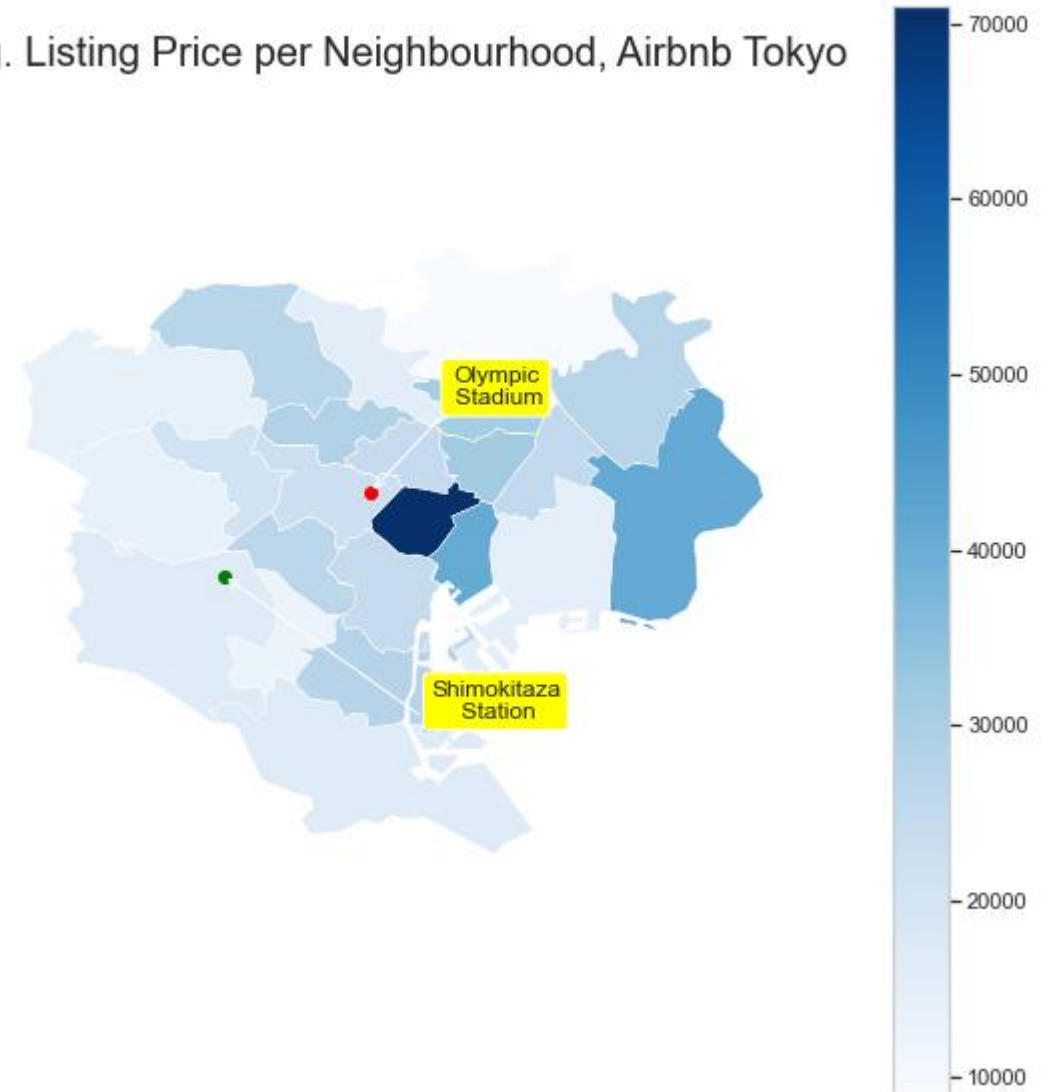


Discussion: Redrawing the two venues with reference to average Room Price in AirBnB datasets

The distance between locations of both the Olympic stadium and Shimokitazawa station is around 5 kilometers. While the average room price are yet less.

Therefore, Shimokitazawa area is promising for new Airbnb hotels and culinary tourism.

Avg. Listing Price per Neighbourhood, Airbnb Tokyo



Results(7): The DataFrame containing FourSquare dataset around Shimokitazawa station in Setagaya-ward, Tokyo

```
dataframe_filtered.head()
```

	name	categories	address	lat	lng	labeledLatLngs	distance	postalCode	cc	city	state	country	formattedAddress	crossSt
0	Mintei (珉亭)	Chinese Restaurant	北沢2-8-8	35.662593	139.669498	[{"label": "display", "lat": 35.662593, "lng": ...}	155	155-0031	JP	世田谷区	東京都	日本	[北沢2-8-8, 世田谷区, 東京都, 155-0031, 日本]	
1	Ushitora 2 (うしとら 貳号店)	Beer Bar	北沢2-9-3	35.662289	139.668810	[{"label": "display", "lat": 35.662289, "lng": ...}	144	155-0031	JP	世田谷区	東京都	日本	[北沢2-9-3 (三久ビル 2F), 世田谷区, 東京都, 155-0031, 日本]	三久ビル
2	BALLOND'ESSAI Latte & Art	Coffee Shop	北沢2-30-11	35.663096	139.667637	[{"label": "display", "lat": 35.663096, "lng": ...}	62	155-0031	JP	東京	東京都	日本	[北沢2-30-11 (1F), 世田谷区, 東京都, 155-0031, 日本]	
3	Rojiura Curry SAMURAI.	Japanese Curry Restaurant	北沢3-31-14	35.664722	139.667041	[{"label": "display", "lat": 35.664722, "lng": 139.667041, "display": "Rojiura Curry SAMURAI."}]	172	155-0031	JP	世田谷区	東京都	日本	[北沢3-31-14, 世田谷区, 東京都, 155-0031, 日本]	
4	Nishinba (にしんば)	Seafood Restaurant	北沢2-9-20	35.662266	139.669169	[{"label": "display", "lat": 35.662266, "lng": 139.669169, "display": "Nishinba (にしんば)"}]	162	155-0031	JP	世田谷区	東京都	日本	[北沢2-9-20, 世田谷区, 東京都, 155-0031, 日本]	

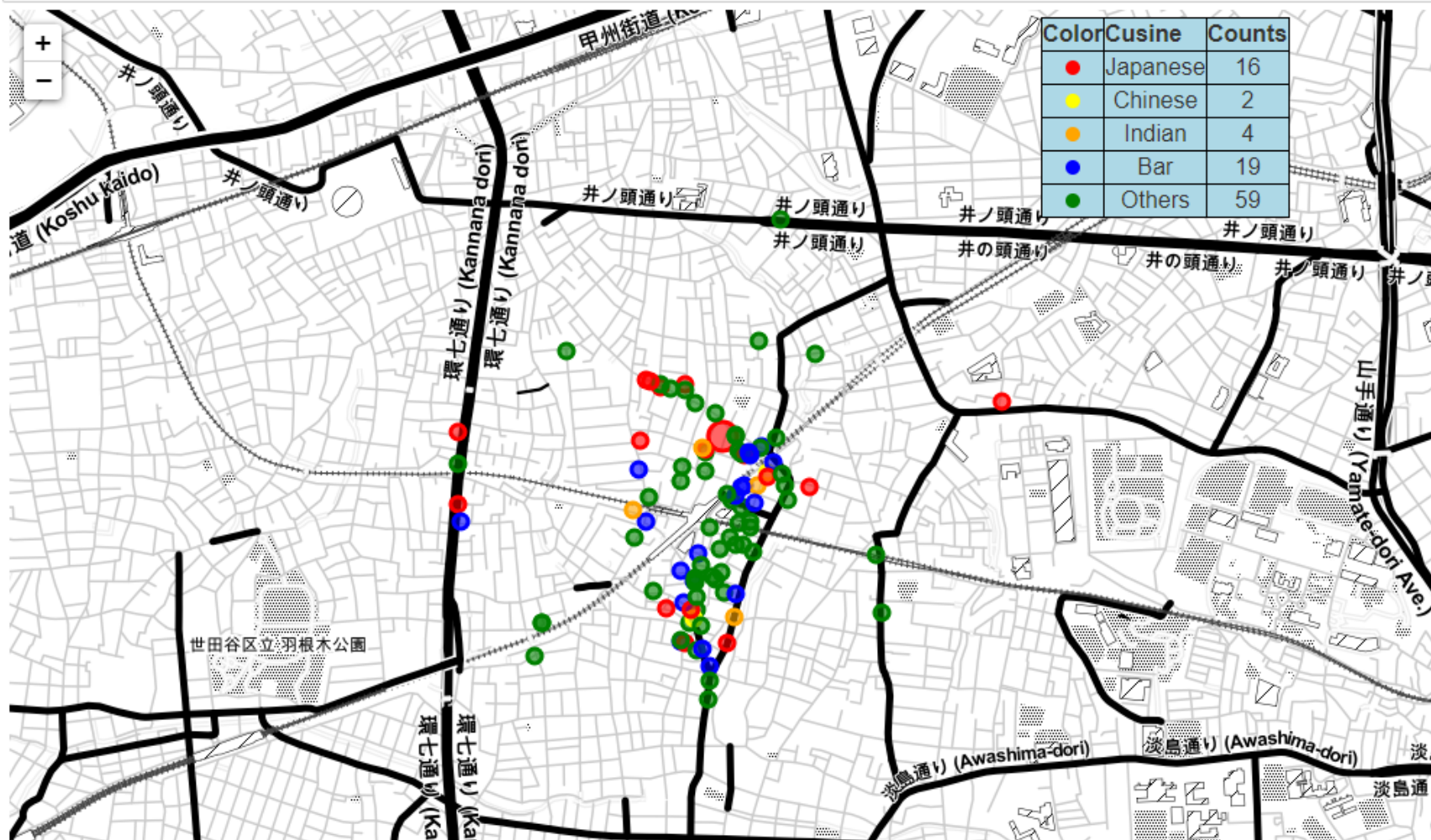
Data design and segmentation:

Assigning cuisine items to categories

```
cat_japanese = ["japanese", "sushi", "ramen", "sashimi", "udon", "soba", "izaka", "izakaya", "tempura"]
cat_chinese = ["chinese"]
cat_indian = ["india", "indian", "curry", "seafood", "veg", "masala", "spice", "tandoori", "tikka", "kofta", "nan"]
cat_indian += ["italian", "pizza", "spaghetti", "Panzenella", "Bruschetta", "Focaccia", "Pasta", "Carbonara", "Margherita", "Risotto"]
cat_bar = ["bar", "beer", "sake", "wine", "whisky", "cocktail", "osake"]
cat_korean = ["korean", "yakiniku", "toast"]
cat_cafe = ["coffee", "cafe", "sandwich"]
cat_fastfood = ["fast", "mcdonalds", "king"]
```

In the third and final part of the current work, I focus on FourSquare dataset to carry on key analyses on the specific promising business. For this purpose, I pursued statistical analysis and data visualization with bar chart and choropleth maps: Count and compare the number of restaurants based on culinary categories.

Legend: Assignment of cuisine names by different colors around Shimokitazawa station in Setagaya-ward, Tokyo



The legend of this map assigns names for respective cuisines by different colors, and count the number of restaurants/bars/café and categorized them.

Note that while Japanese cuisines leading the list with 16 restaurants, Indian cuisines are second in the number of restaurants.

Conclusion

- **AirBnB data analysis:**
 - It appears that the shopping streets around Shimokitazawa station at Setagaya-ku will be attracting for a significant number of visitors.
 - First and foremost, the average airBnB price is affordable while the location is only a few kilometers away from the main venue of Tokyo Olympic.
 - Second, the area has the highest population in Tokyo, which will support the continual growth of any new business.
 - Third, the business opportunity can be made scalable to sustain the growth beyond 201 after the Olympic is over.
- **FourSquare dataset analysis:**
 - This study provided key analyses on the specific promising business. Due to COVID-19 spread and restricted human mobility, neighboring countries of Japan will be comprising the most of the visitors. keeping the scenario in mind and segmenting the food categories into respective culinary, it appeared that Indian cuisine are most popular next to local Japanese cuisine.

Recommendations

- **Business Recommendation:**

- These series of analyses suggested the locality around Shimokitazawa station in Setagaya-ku in Tokyo for potential business opportunities. It appeared that Business in Food industry is promising here, and found that Indian cuisine are most popular next to local Japanese cuisine. To avoid competitive price adjustment and return of investment, any investment in Indian Restaurant Business seems Promising.
- The skillsets acquired in this lab
 - (1) Data-scraping from a Wikipedia webpage, data-plugging into DataFrame, and Data-cleaning.
 - (2) Converted addresses into their equivalent latitude and longitude values.
 - (3) Used the Foursquare API to explore neighborhoods in Tokyo City.
 - (4) Used the explore function to get the most common venue categories in each neighborhood, and then use this feature to group the neighborhoods into clusters.
 - (6) Finally, used the Folium library to visualize the neighborhoods in Tokyo City.

- **Skill recommendation**

- The last part of this work successfully included python outputs in HTML - which was the output of the legend table in the last map. The codes were very large, and I hope the community can develop a suitable tool for “Python in HTML” in the same manner in “CGI”.

Thank you very much.