VISUALIZING A DASHBOARD FOR AIRBNB DATA IN NEW YORK
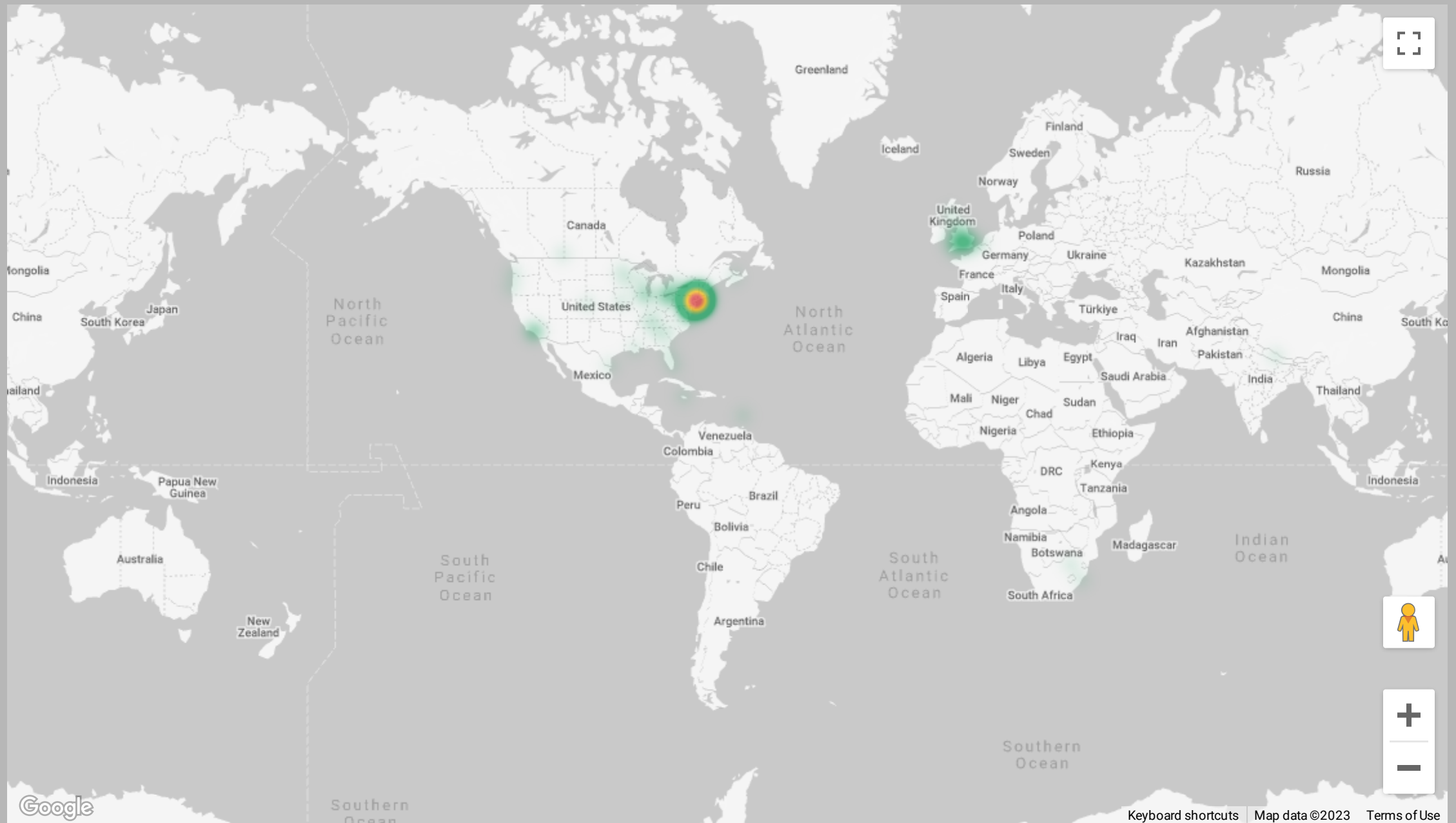
BY
GULNAAZ SHAIKH (gs3058@rit.edu)
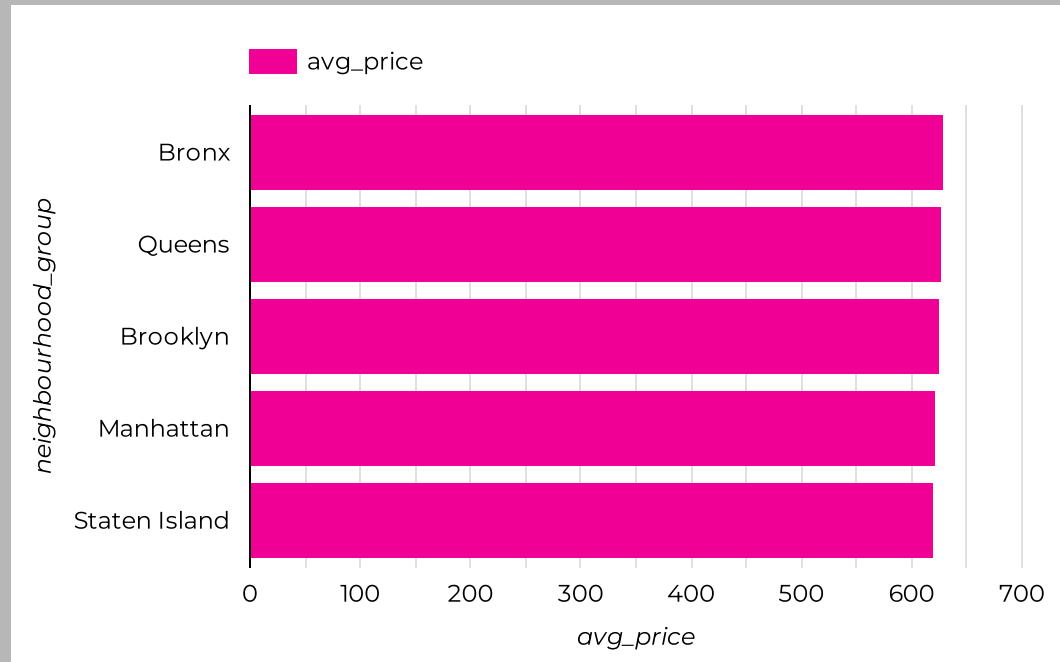PARTH KEYUR GAWANDE (pg5598@rit.edu)
VIKASHINI SABARINATHAN (vs3224@rit.edu)
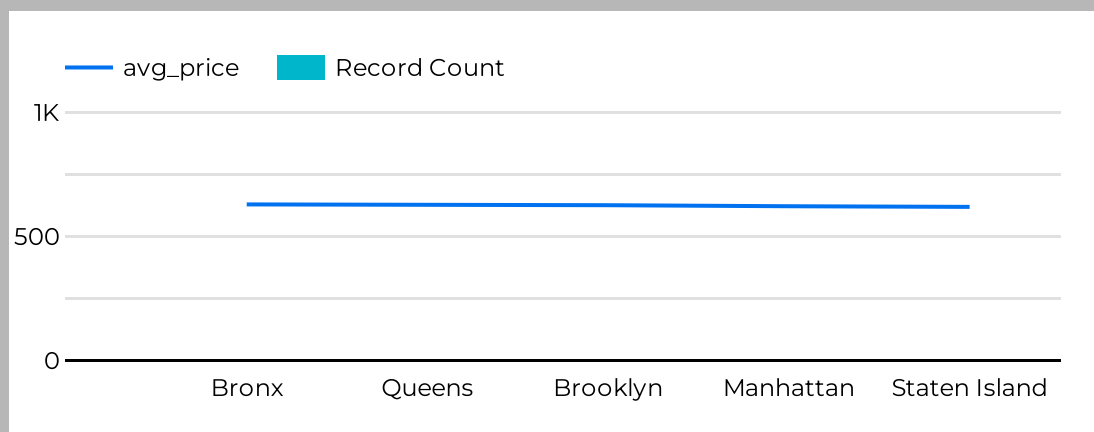
CURRENT SCENARIO FOR AIRBNBS IN NEW YORK CITY

AVERAGE PRICE BY NEIGHBOURHOOD GROUP

Legend: ■ avg_price

Chart (horizontal bar) — neighbourhood_group vs avg_price:
- Bronx
- Queens
- Brooklyn
- Manhattan
- Staten Island

x-axis (avg_price): 0, 100, 200, 300, 400, 500, 600, 700

avg_price

625.06

Legend: — avg_price ■ Record Count

y-axis: 0, 500, 1K
x-axis: Bronx, Queens, Brooklyn, Manhattan, Staten Island

The average price of an Airbnb refers to the typical cost of booking a property listed on the platform. This metric can be helpful in analytics because it provides insights into the pricing trends and patterns of Airbnb rentals in a specific location.

Here, The average price of Airbnbs in NYC area is $625.06.

By analyzing the average price of Airbnb listings, we can identify fluctuations in demand and supply and adjust the pricing strategies accordingly to maximize profitability.

Moreover, knowing the average price of an Airbnb can help businesses and individuals to understand the competition and the market dynamics of the rental industry.

Here, we can observe that the average price of an Airbnb is between $619-$629, with Bronx leading the listing.

This information can guide decision-making around property acquisition, pricing strategies, and marketing efforts.

Overall, the average price of Airbnb provides a useful benchmark for understanding the pricing trends and patterns of the short-term rental market, and can be a valuable tool for informed decision-making in the industry.

AVERAGE AVAILABILITY BY NEIGHBOURHOOD GROUP & ROOM TYPE
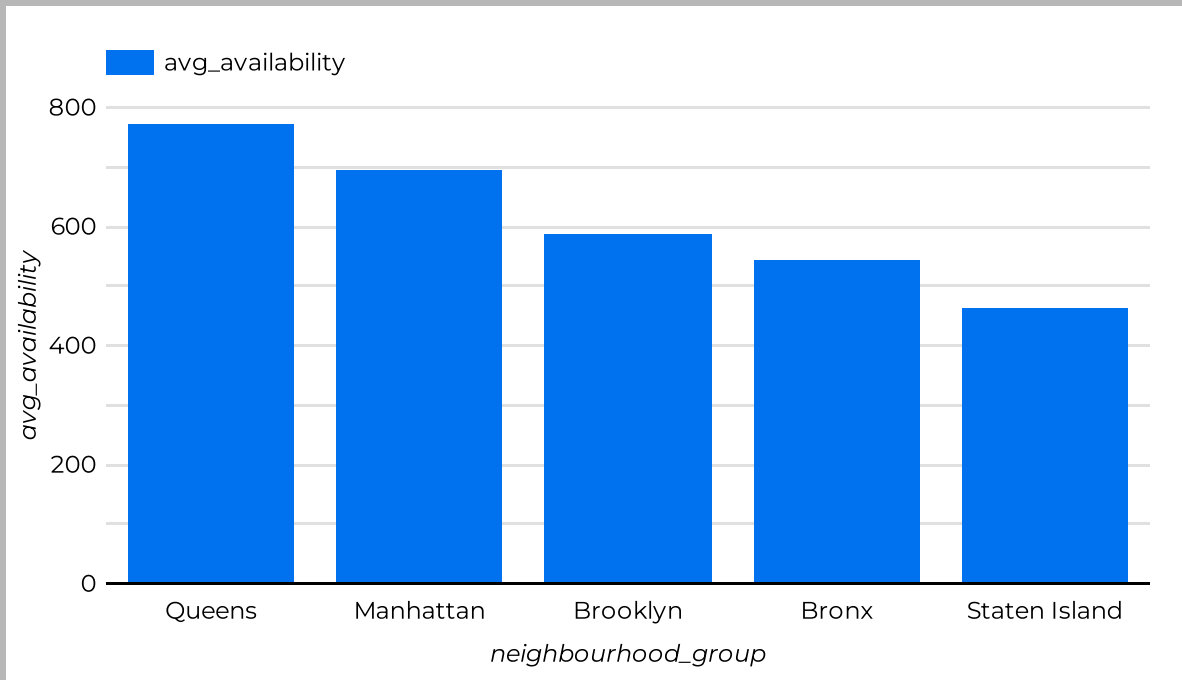
The metric "Average Availability by Neighborhood Group & Room Type" in Airbnb analytics refers to the average number of days per year that a specific room type in a particular neighborhood group is available for booking on the Airbnb platform.

By analyzing the average availability, we can identify that Queens has a higher availability throughout the year. Followed by Manhattan Brooklyn, Bronx and Staten island Furthermore, we can identify the high-demand areas and the most popular room types that generate the highest occupancy rates.
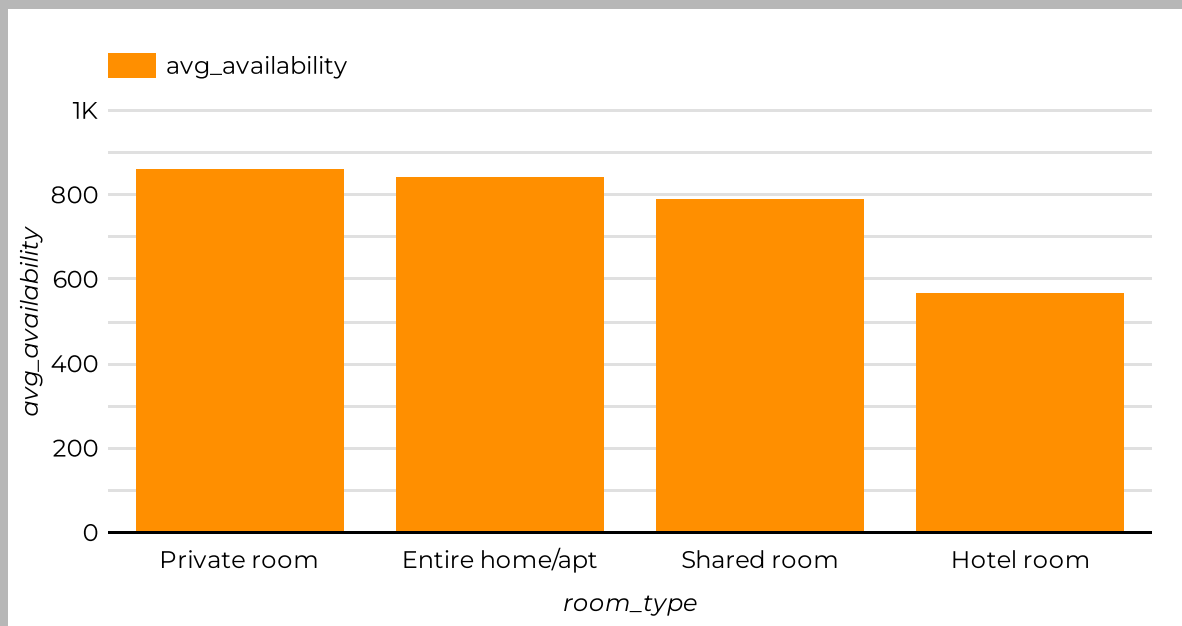
For example, we can observe that Queens has a high average availability for Hotel room type, it might indicate low demand or a lack of popularity for that type of room. Hosts or property managers can use this information to adjust their pricing strategy or marketing efforts to attract more bookings.

On the other hand, Entire home/apt room type has low availability in Queens and it may indicate high demand for that type of room. Hosts or property managers can adjust their pricing strategy to maximize revenue during peak seasons.

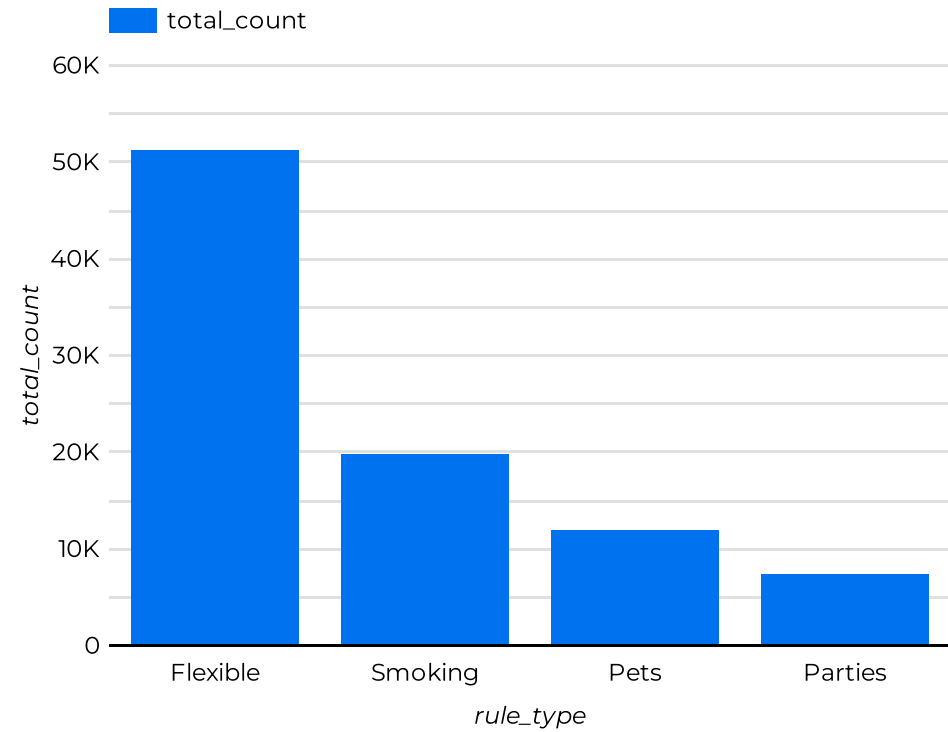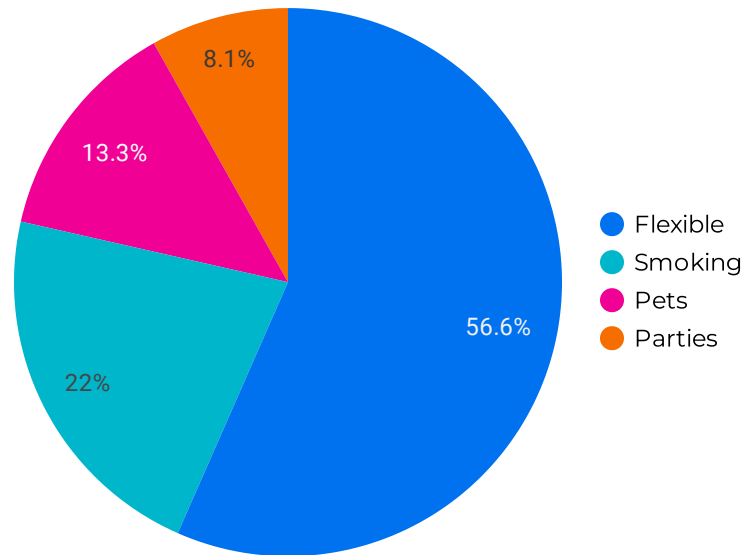# POPULARITY OF NEIGHBOURHOOD BASED ON EXCELLENT REVIEWS
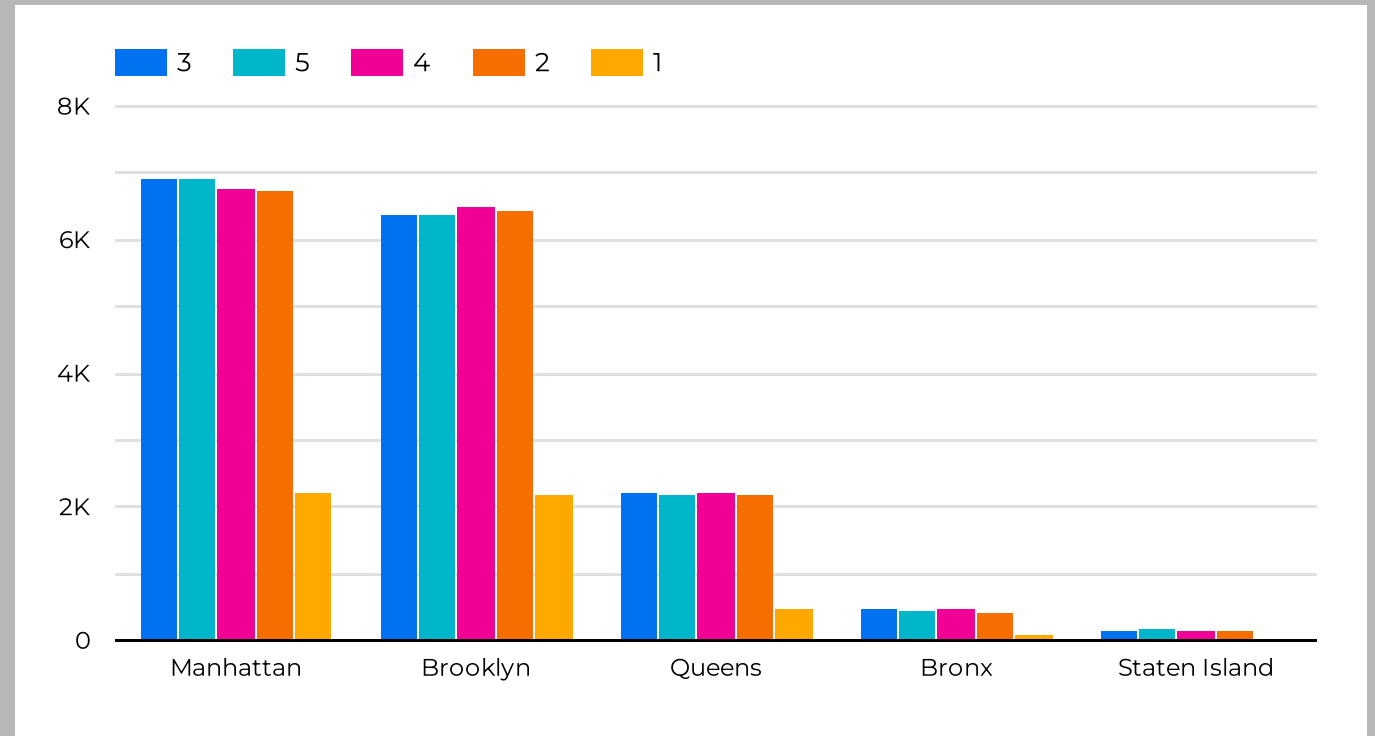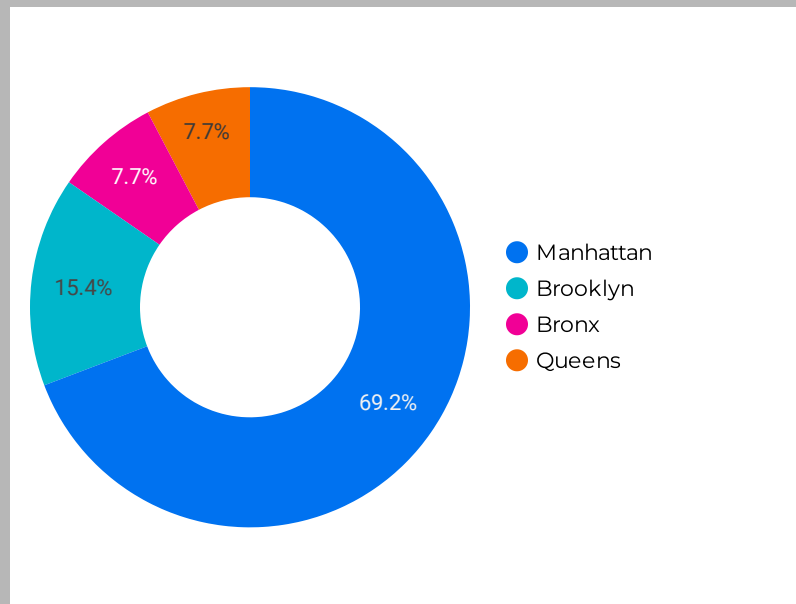
Exploring the data in NYC, it can be seen that the highest number of reviews are received for Manhattan, followed by Brooklyn, Queens, Bronx and lastly Staten island.
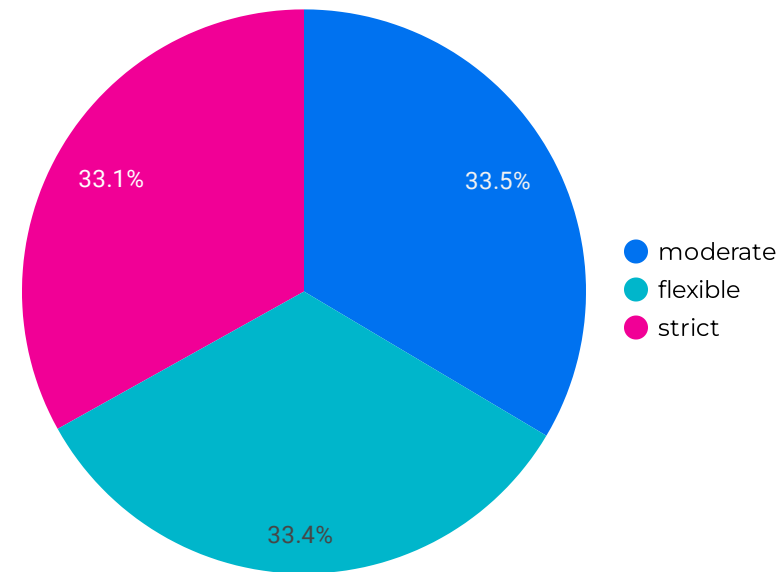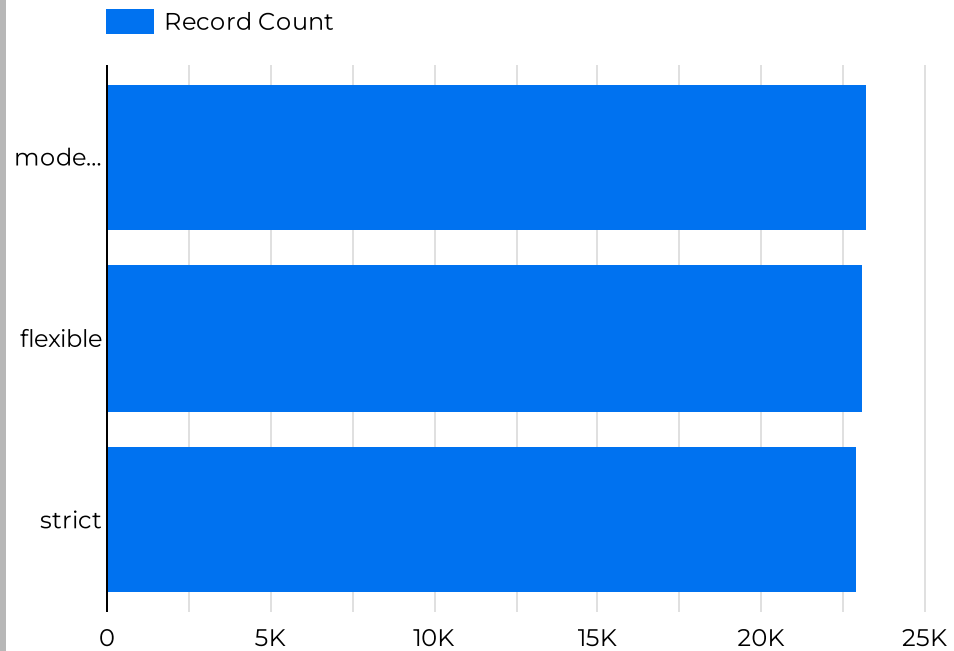
Investing in areas like Brooklyn, Bronx and Staten island aiming to provide better facilities, leading to more number of excellent reviews in those areas too could be a good business opportunity.
On the other hand, since there is a demand for Airbnbs in Manhattan the most, it could also lead to a great business opportunity.

HOUSE RULES

Pie chart:
- Flexible: 56.6%
- Smoking: 22%
- Pets: 13.3%
- Parties: 8.1%

Bar chart (total_count):
- Flexible
- Smoking
- Pets
- Parties

y-axis: total_count (0 to 60K)
x-axis: rule_type

CANCELLATION POLICY

Bar chart (Record Count):
- mode...
- flexible
- strict

x-axis: 0 to 25K

Pie chart:
- moderate: 33.5%
- flexible: 33.4%
- strict: 33.1%

Allowing Pets:
Increases the potential pool of guests: Some guests travel with their pets and might prefer staying at an Airbnb that allows them to bring their furry friends along.
Higher nightly rates: By allowing pets, hosts may be able to charge higher nightly rates for their listings as guests are willing to pay extra for the privilege of bringing their pets.
Better reviews and ratings: Guests who are able to bring their pets along may leave better reviews and ratings, which can attract more bookings in the future.

Allowing Parties:
Higher nightly rates: If a host is willing to allow parties, they may be able to charge a premium for their listing. This is because many guests who want to throw parties may not be able to find suitable venues and may be willing to pay extra for the convenience of having an Airbnb.
Repeat business: If a guest has a successful party at an Airbnb, they may be more likely to book the same listing again in the future.
Positive reviews and ratings: If a party goes well and guests are happy with the experience, they may leave positive reviews and ratings, which can attract more bookings in the future.

Allowing Smoking:
Higher nightly rates: Similar to allowing parties, hosts who allow smoking may be able to charge a premium for their listing as many guests who smoke may not be able to find suitable accommodation elsewhere.
Repeat business: Guests who smoke may be more likely to book the same listing again in the future if they know it allows smoking.
Less competition: There may be fewer listings that allow smoking, which means less competition for hosts who are willing to allow it.

However, it's important to note that there are also potential drawbacks associated. Therefore, allowance of such house rules should be under moderation and perhaps having a smoking zone, allowing parties and loud noises with a time limit could be beneficial

Since we saw that only 33% of the Airbnbs have a flexible cancellation policy. Investing in an Airbnb with a flexible cancellation policy can offer several benefits for Airbnb hosts and may lead to increased revenue. Here are some potential benefits:

More bookings: Guests are more likely to book a listing with a flexible cancellation policy since it gives them the freedom to cancel their reservation without incurring a penalty. This can increase the number of bookings and ultimately generate more revenue for the host.

Higher occupancy rates: By having a flexible cancellation policy, hosts can attract more last-minute bookings. This can help fill any vacant dates, resulting in higher occupancy rates and revenue.

Positive reviews and ratings: Guests are more likely to leave positive reviews and ratings for a host with a flexible cancellation policy. This can lead to more bookings in the future as potential guests are more likely to choose a listing with good reviews.

More repeat bookings: If guests have a positive experience with a host's flexible cancellation policy, they may be more likely to book with the same host in the future. This can lead to more repeat bookings and increased revenue.

Competitive advantage: With so many listings on Airbnb, offering a flexible cancellation policy can set a host apart from their competition. This can help attract more bookings and increase revenue.

DISTRIBUTION OF ROOM TYPE PER NEIGHBOURHOOD
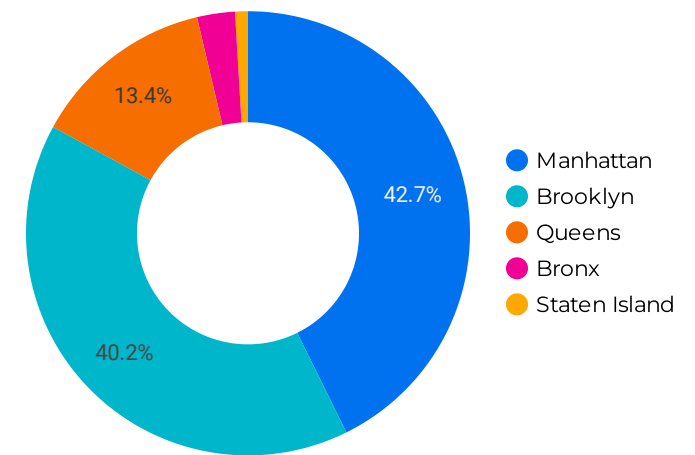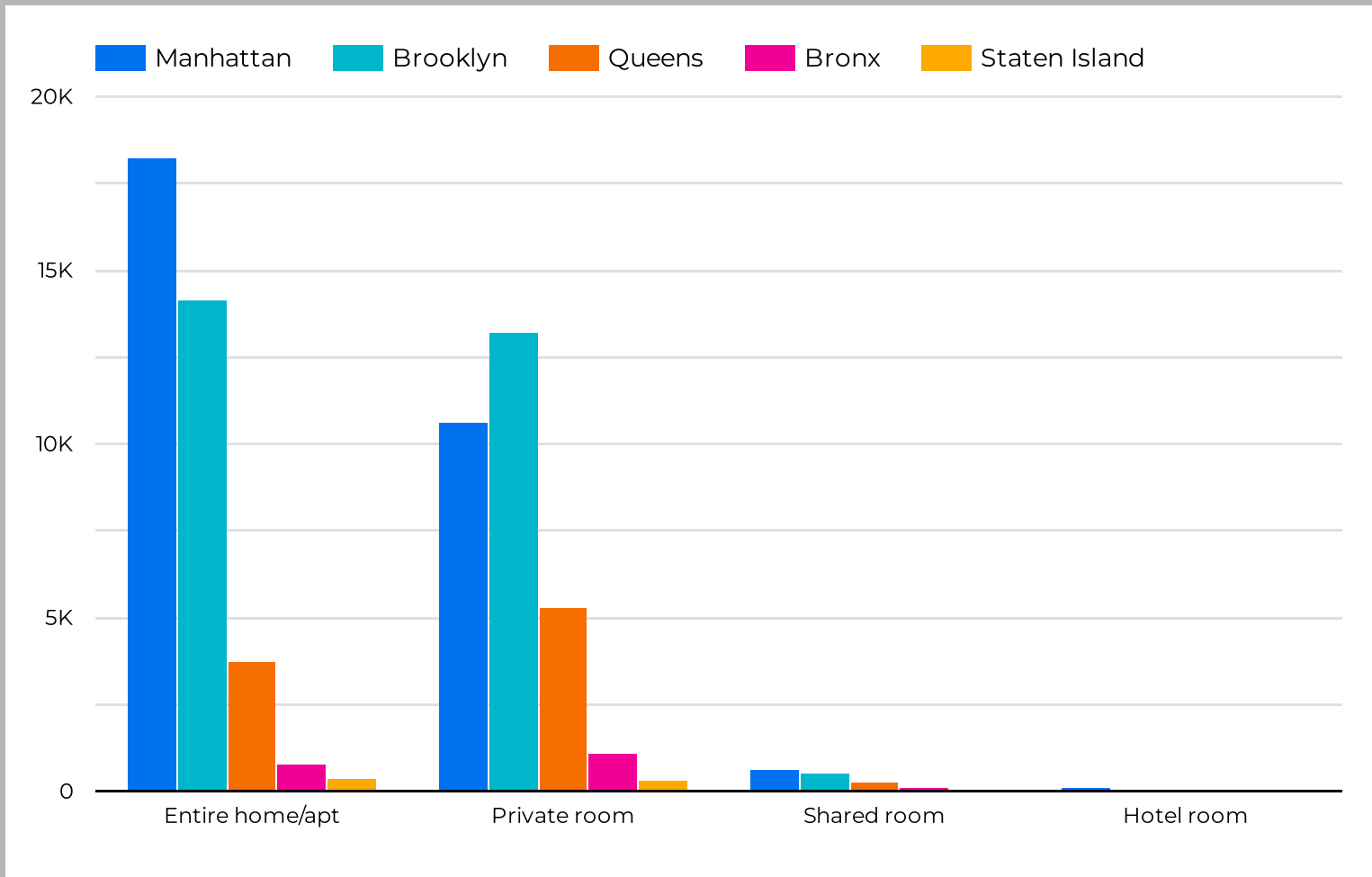
Looking at the statistics for the Airbnb listings in the NYC area, the highest number of Airbnbs in Manhattan and Brooklyn are Entire home/apt, followed by Private rooms and then shared rooms..
For Queens we have highest number of airbnbs as Private rooms, followed by entire home/apt and lastly the shared rooms.
Since we are looking for an investment opportunity, Queens, Bronx and Staten island have significantly low number of listings,, and therefore, a great investment opportunity. However, the reason for the low numbers could be the demand, since there is more demand in Manhattan and Brooklyn areas, inclusion of more Airbnbs would provide customers with a variety of options to select from and hence, improve revenue.

AIRBNBS CONSTRUCTED WITHIN THE LAST YEARS IN NYC
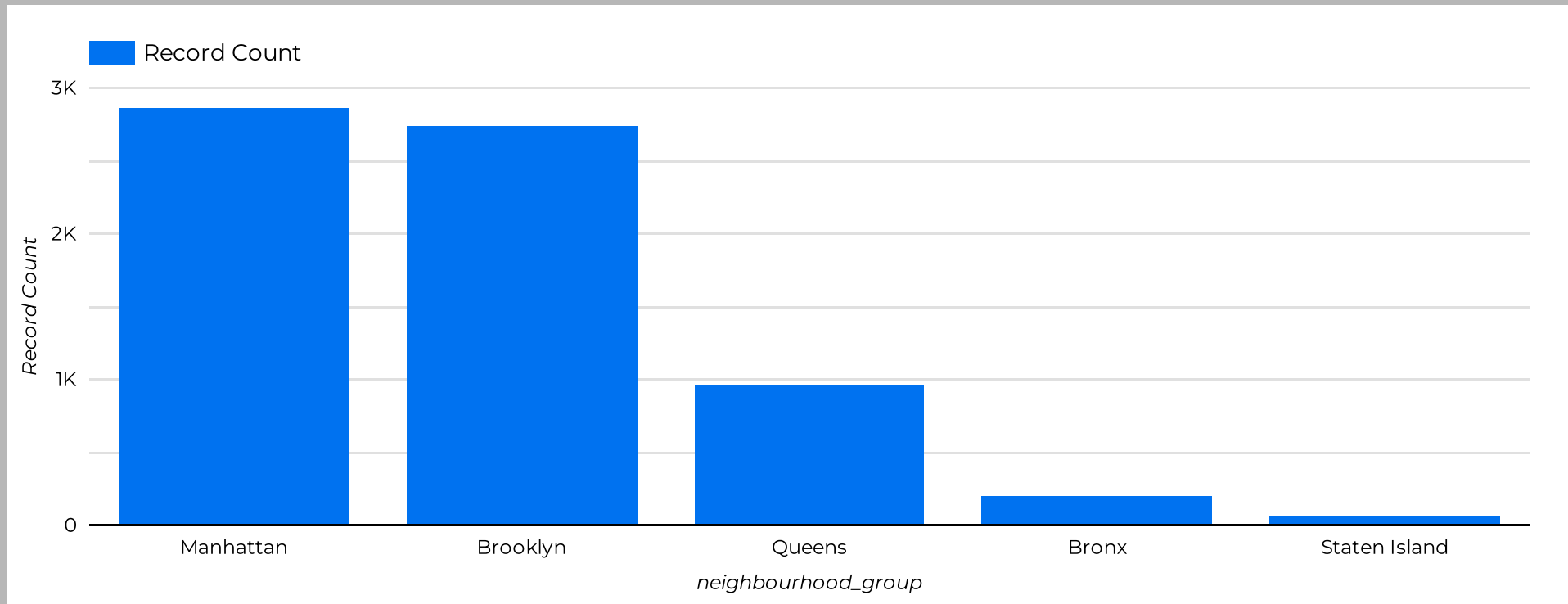
These are the number of Airbnbs built with a construction date after 2020,
We have the highest Number of constructions in Manhattan area, and the lowest in Staten island.
From these figures we can analyze that thefollowing
a. Increase in demand for Manhattan and Brooklyn areas
b. Increase in competition between Airbnbs
c. Increased amenities and attractions in popular areas.

From all our representations we can conclude that the areas for Manhattan and Brooklyn have high demand and competition, and therfore investing in these areas could bring in more revenue