Capstone Project-1
EDA on Airbnb booking analysis

Team members

KAMALUDDIN SHAIKH
AMOL RASAM
SHUBHAM

What is Airbnb?

- Airbnb is an online marketplace connecting travelers with local hosts.

- The platform enables people to list their available space and earn extra income in the form of rent.

- Airbnb enables travelers to book unique homestays from local hosts, saving them money and giving them a chance to interact with locals.

- Founded in San Francisco in 2008 as a start-up, the company has become a worldwide booking platform.

- Airbnb is present in over 190 countries across the world.

Airbnb Services

- Enables owners to list their space on the platform and earn rental money.

- Airbnb provides insurance to listed properties.

- Gives cheap options to travelers to stay with local hosts.

- Facilitates the process of booking living space for travelers.

- Rating and review system for hosts and guests.

- User-friendly app and web based structure.

How Airbnb works?

1 Hosts sign up on the platform and list their spaces

2 Travelers browse the website and book spaces

3 Admins inform hosts of bookings

4 Travelers pay the rental fee

5 Travelers check in and check out

6 Travelers can rate and review their stays

1: What can we learn about different hosts and areas?
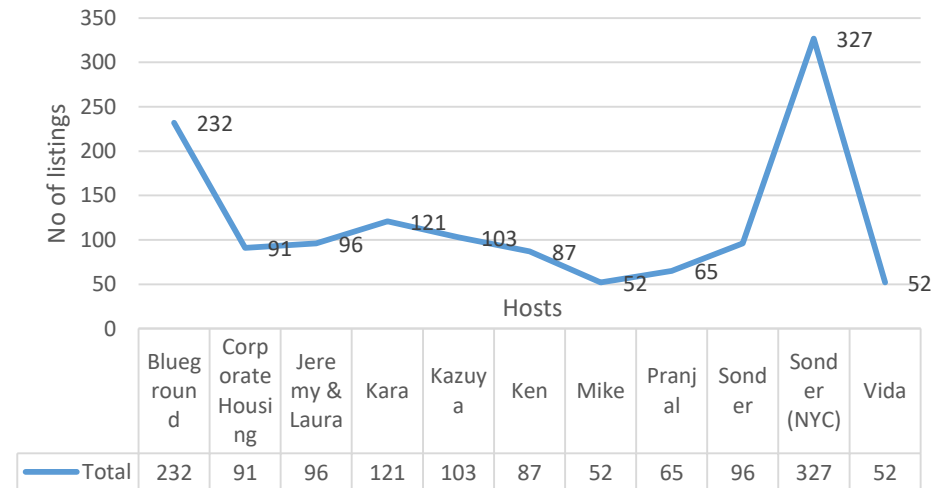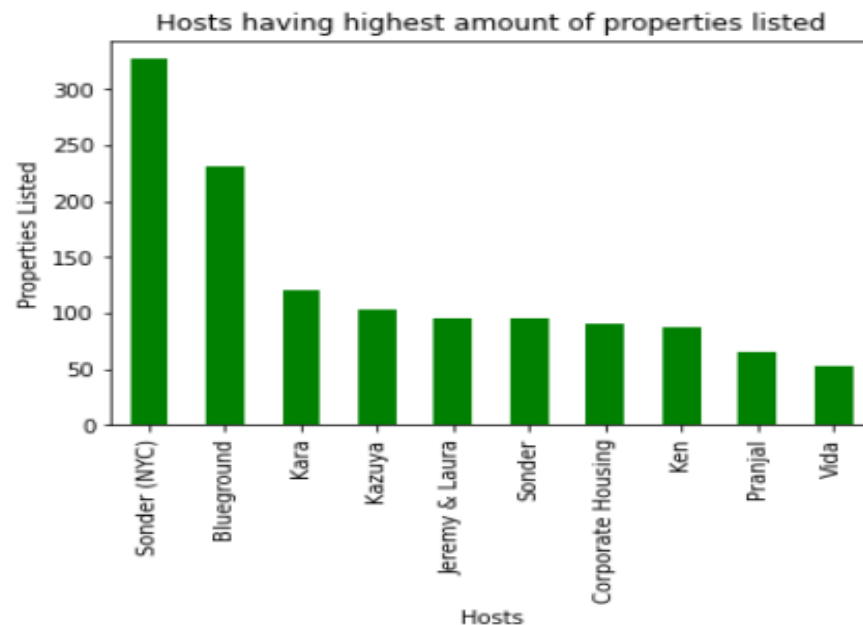
•Neighborhood group

- We can see Most properties are located in Manhattan and Brooklyn.

- This clearly shows that Manhattan and Brooklyn are the most popular destinations at Airbnb in New York City.

- Accommodation in the Bronx and Staten Island are rather marginal.
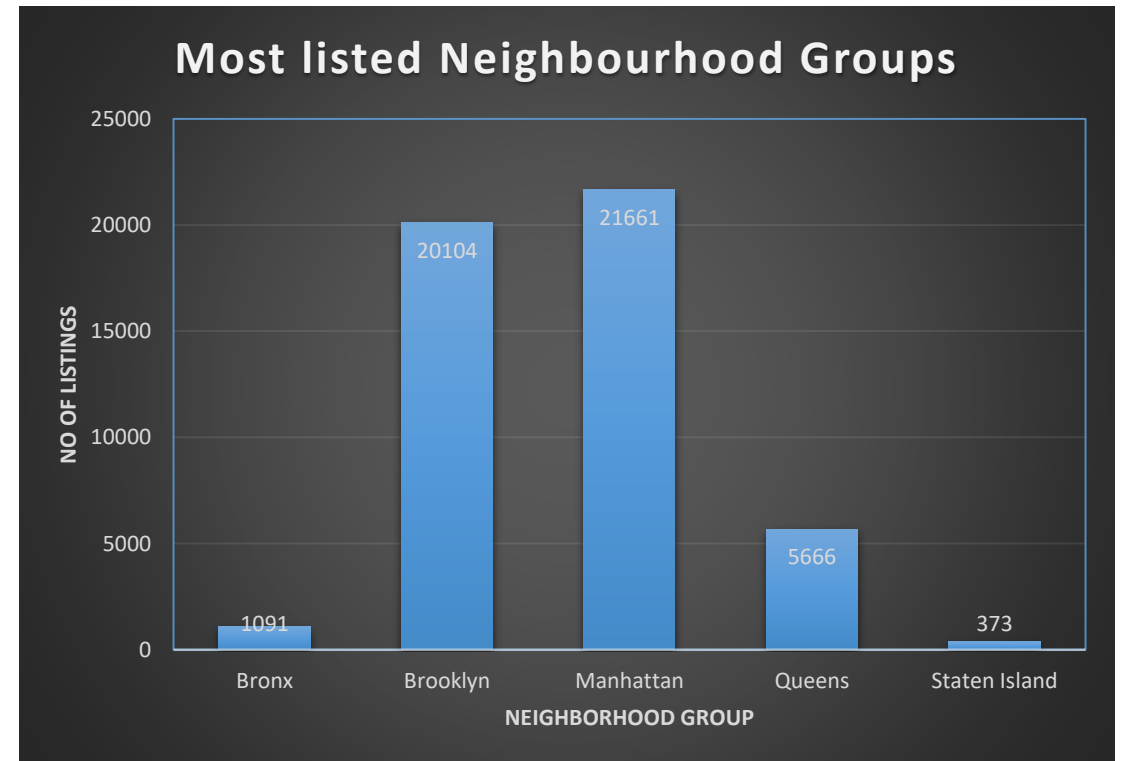
•Top Hosts by listing

- We can that "Sonder(NYC)" has 327 no of properties listed which is the highest.
- "Blueground" has 232 the second highest.
- "Kara" with 121 no of listings the third highest and so on.

Hosts having highest amount of properties listed

Top 10 Hosts

	Blueground	Corporate Housing	Jeremy & Laura	Kara	Kazuya	Ken	Mike	Pranjal	Sonder	Sonder (NYC)	Vida
Total	232	91	96	121	103	87	52	65	96	327	52

# 2:What can we learn from predictions?(ex: locations, prices, reviews, etc.)

In this part we will try to answer the following questions:

- Which neighbourhood group has highest no of reviews. As compared   to the listing of Neighbourhood group.

- What is the preference of customer in respect to price and at what range of price most properties are listed.

- Room type share and which type of room guest usually prefer.

- Which are the most expensive Neighborhoods in our data set.

# Neighborhood group vs No of Reviews

- We can see that Queens has highest No of Reviews.

- We know from previous analysis that Manhattan has most no of listed properties.

- This means that the number of properties listed on the Airbnb does not mean that the number of customers you will have will be more.

	neighbourhood_group	number_of_reviews
0	Bronx	321
1	Brooklyn	488
2	Manhattan	607
3	Queens	629
4	Staten Island	333

Neighborhood group vs Max Reviews
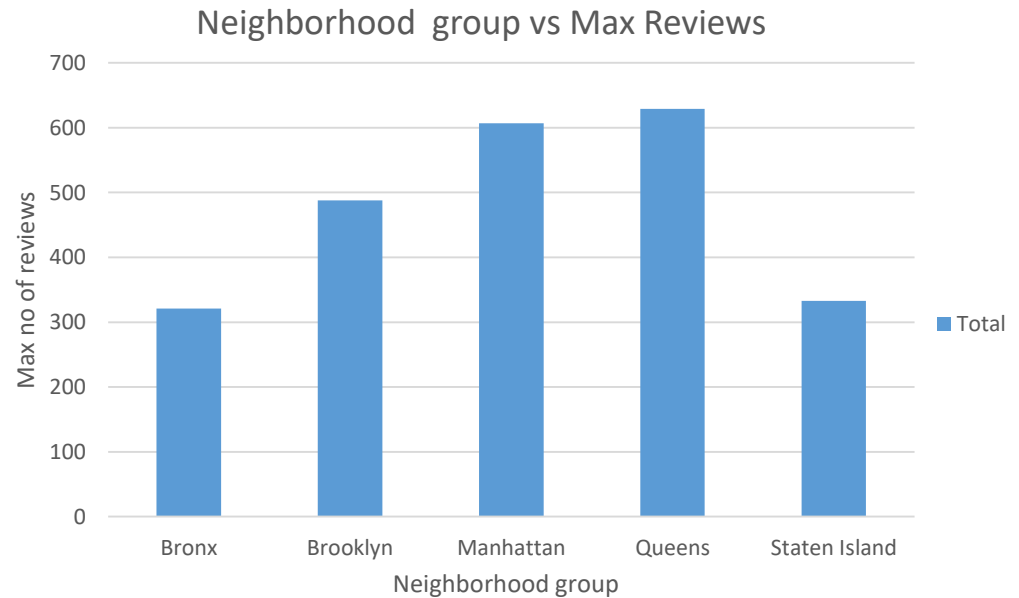
Price vs No of Reviews

- By analyzing the price we can say that Most of the properties price are between 0 - 2000.
- we can say that most people prefer to stay in place where price is less.

Price vs Max no of reviews

Price vs Number of Reviews
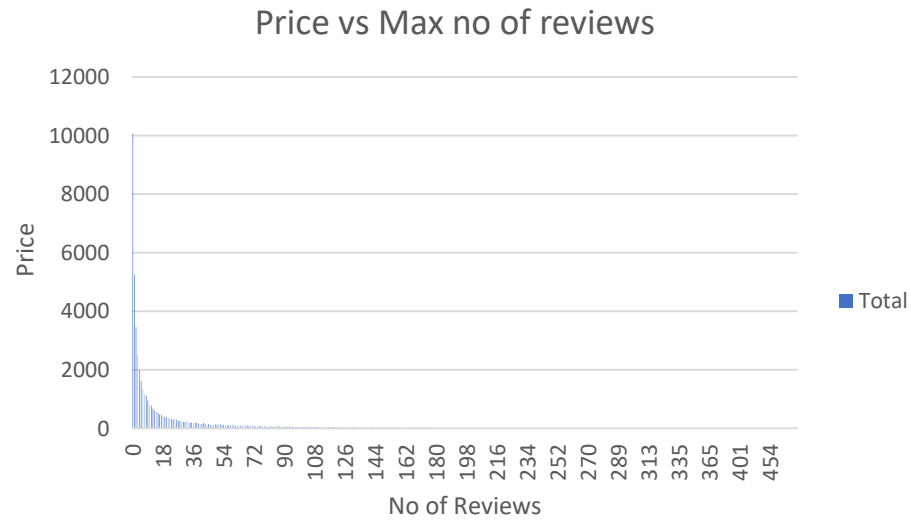
Analyzing Room Type

Room Type

- We can see in the Pie chart that the Entire Home/Apartment has the highest share of 52%, followed by the Private Room 46%, and the least preferred is Shared Room 2%.

Total

- Entire home/apt
- Private room
- Shared room
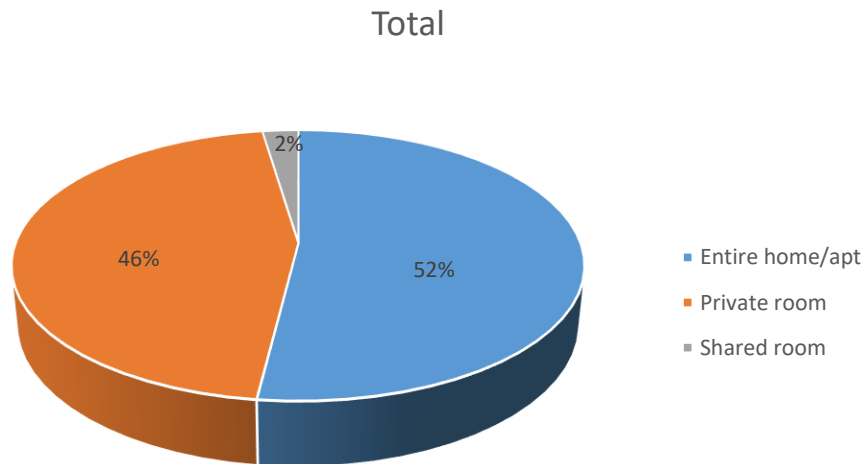
Room Type VS Reviews

- We can see from graph that people usually like to stay in private room. thus it has highest no of Reviews.
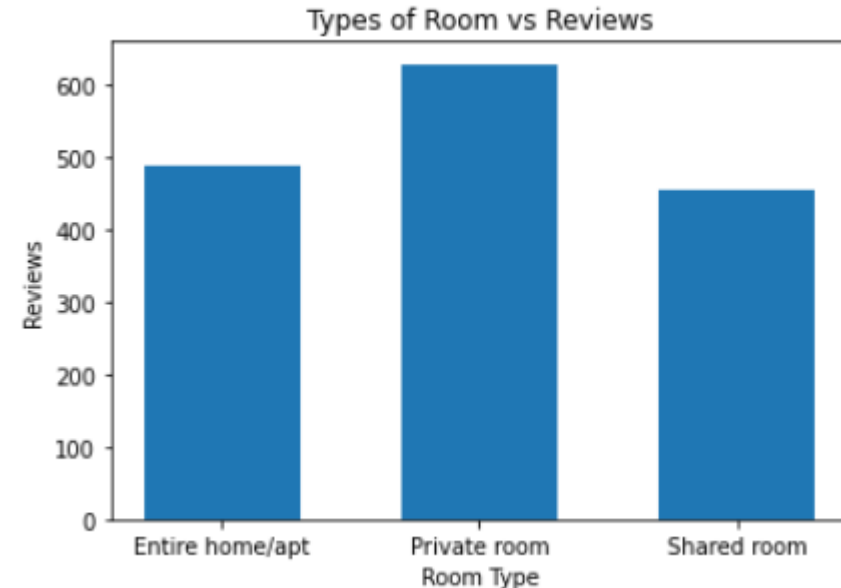
Most Expensive Neighborhoods

- By comparing Neighborhoods with Average price we can see the Top 10 Most expensive Neighborhood.

- Fort "Wadsworth" is most expensive Neighborhood with an average price of $800 followed by "Woodrow" price $700, "Tribeca" price $490.60 and so on.
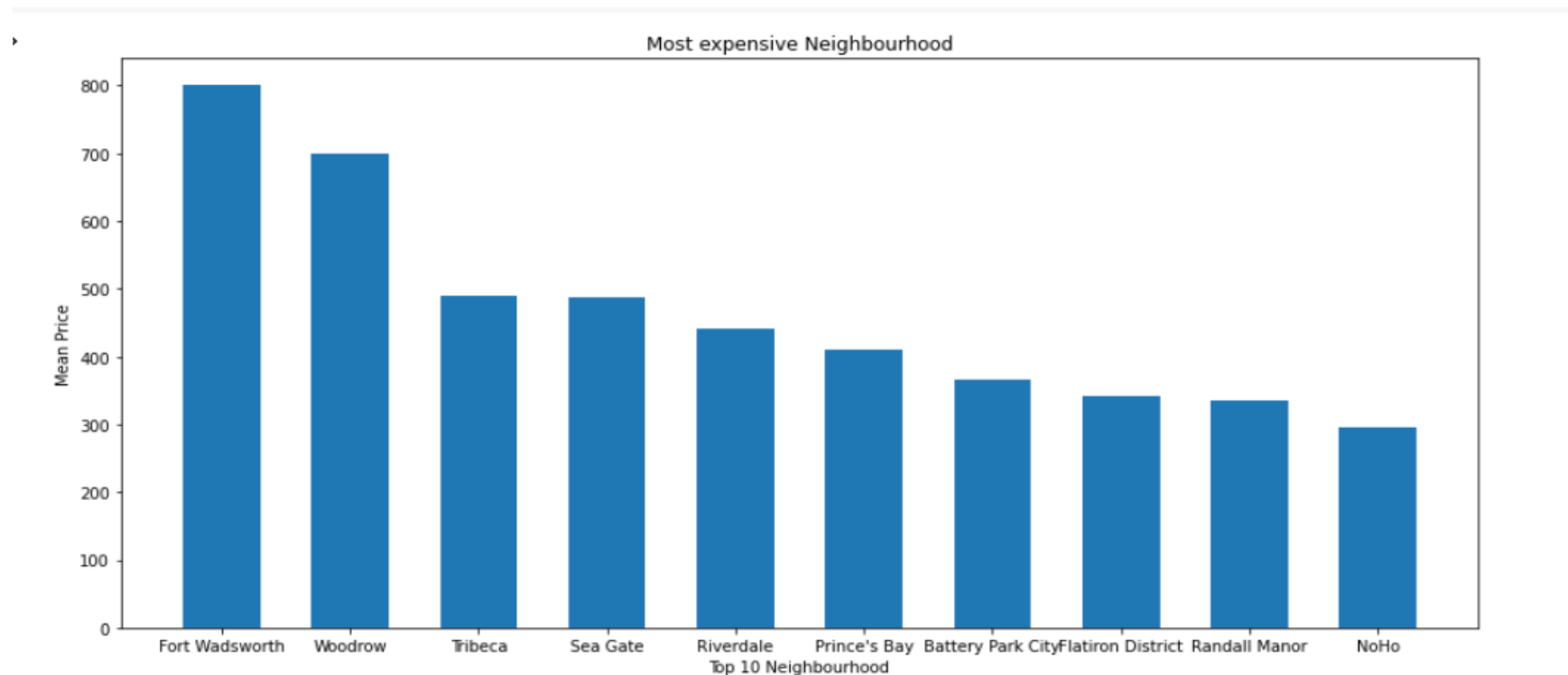
3:Now lets see which hosts are the busiest and why?

- We will see the Top 10 Busiest hosts.

- We can see from below Graph that "Dona" is the busiest host having 629 no of reviews followed by "Ji" having 607 no of reviews, then "Maya" – 543 and so on.

- Taking a sample of first 100 busiest host to find their choices regarding room type   we can say that most number of hosts are opting for 'Private room' than the rest.

- almost 2/3rd of the hosts leaning towards 'private rooms' in the sample size of busiest host. This might be influential factor for most busiest hosts.

- They are repetitive in terms of choosing private rooms.

Top 10 busiest Hosts
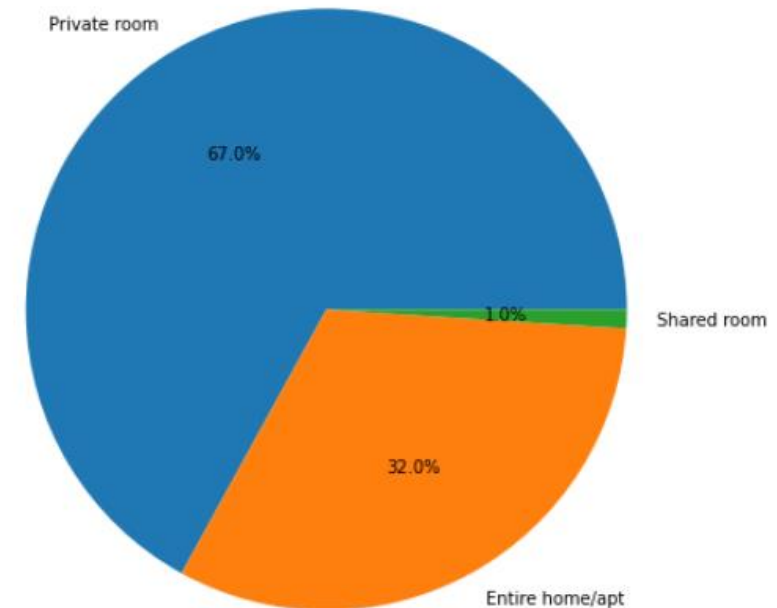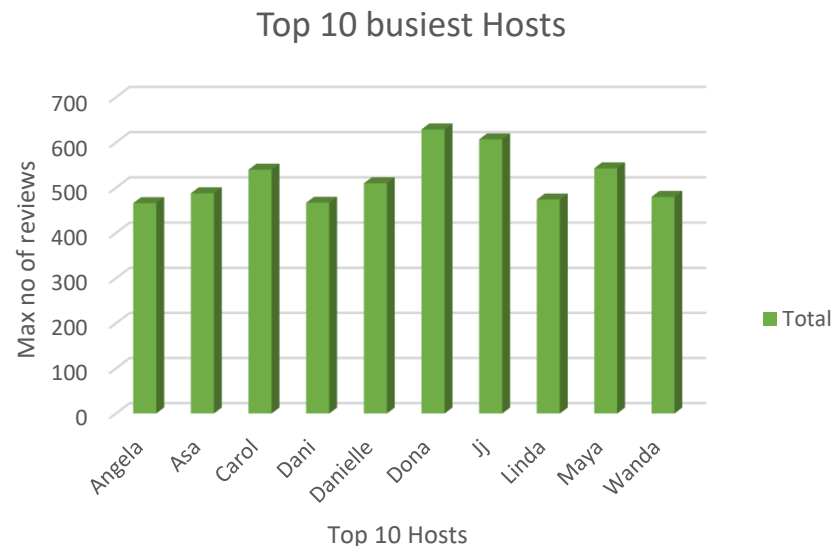
4:Is there any noticeable difference of traffic among different areas and what could be the reason for it?

- From the Bar plot we can see that Manhattan and Brooklyn has the highest traffic share followed by Queens, Bronx and Staten Island.

- From previous analysis we know that most no of properties are listed in Manhattan and Brooklyn that's why it has most Traffic

- We know that Manhattan and Brooklyn have many places of Tourist attraction like "**Statue of Liberty** and **Ellis Island**" in Manhattan, "**Prospect Park**, **Cony Island**" in Brooklyn.

- Most guest prefer Entire home/apt and Private rooms. Manhattan and Brooklyn are tourist places therefore people are booking Entire home/apt and Private rooms for their family and friends.

Highest traffic Neighborhood
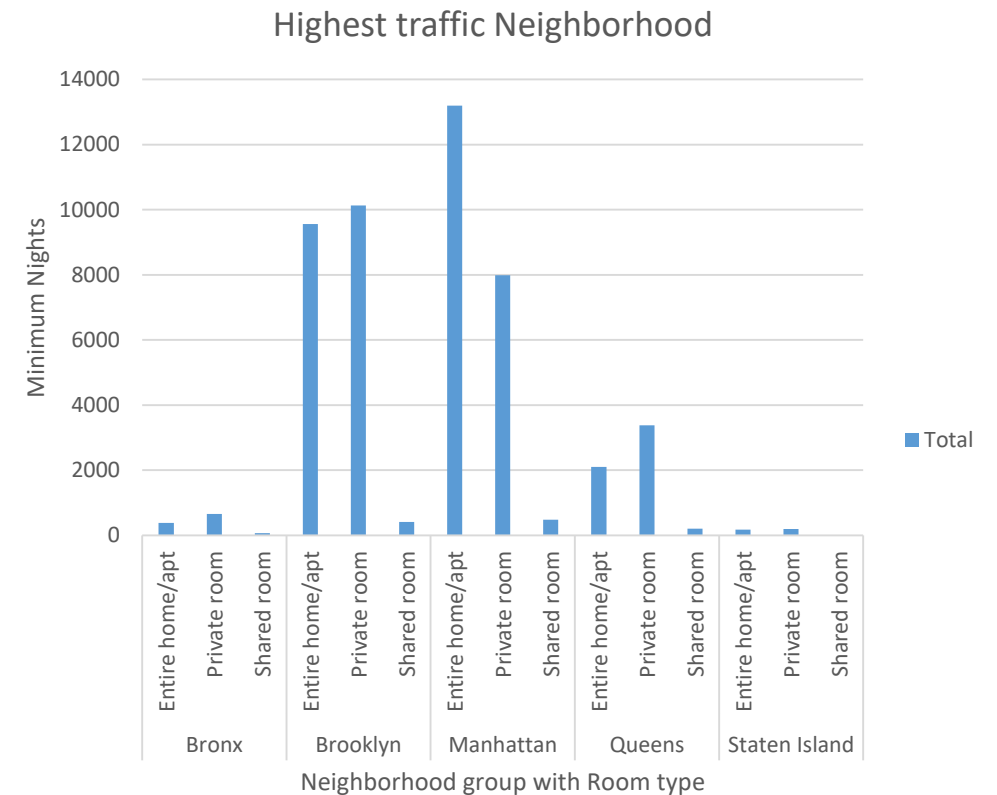
Conclusion

- Most properties are located in Manhattan and Brooklyn. This clearly shows that Manhattan and Brooklyn are the most popular destinations at Airbnb in New York City.

- Sonder(NYC) is a Top Host, with 327 no of properties listed.

- Queens has highest No of Reviews on Airbnb.

- Most of the properties price are between 0 - 2000. people prefer to stay in place where price is less.

- Entire Home/Apartment has the highest share of 52% in room type, followed by the Private Room 46%, and the least preferred is Shared Room 2%.

- People usually like to stay in private room. it has highest no of Reviews among all room type.

- Fort "Wadsworth" is most expensive Neighborhood with an average price of $800 followed by "Woodrow" price $700, "Tribeca" price $490.60 and so on.

- Dona is the busiest host followed by "Ji" then "Maya" – 543 and so on.

- Manhattan and Brooklyn has the highest traffic share followed by Queens, Bronx and Staten Island. Because Manhattan and Brooklyn have many places of Tourist attraction like "**Statue of Liberty** and **Ellis Island**" in Manhattan, "**Prospect Park**, **Cony Island**" in Brooklyn.

Thank You