

Capstone Project

Airbnb Booking Analysis

Team Members

Ankush Saini

Behara Sai Keerthi

DISCUSSION POINTS

- About Airbnb
- Data Summary
- Neighborhood groups and their locations
- Correlation of price
- Comparing price on different neighborhood_groups
- Top 10 neighborhoods



DISCUSSION POINTS

- Comparing price on different room type
- Relationship between hosts and areas
- Busiest host
- Most reviewed host
- Neighborhood group and their availability
- Room types and their availability
- Average stay in each room type



ABOUT AIRBNB

Airbnb is an American company that operates an online marketplace for lodging, primarily homestays for vacation rentals, and tourism activities. Based in San Francisco, California, the platform is accessible via website and mobile app. Airbnb does not own any of the listed properties; instead, it profits by receiving commission from each booking. The company was founded in 2008 by Brian Chesky, Nathan Blecharczyk and Joe Gebbia. Airbnb is a shortened version of its original name, AirBedandBreakfast.com.



DATA SUMMARY

- Id- There is a unique id for each listing
- Name - Name of the listing
- Host_id - There is a unique id for each host
- host_name - Name of the hosts
- Neighbourhood_groups - Collection of neighborhood
- Neighborhood - Different neighborhoods
- latitude - latitude coordinates
- longitude - longitude coordinates



DATA SUMMARY

- room_type - Different types of room
- price - Price in dollars
- minimum_nights - Number of nights spent
- Number_of_reviews - Reviews received by the host
- last_review - Last reviewed date
- reviews_per_month - Number of reviews per month
- calculated_host_listing_count - Number of listings per host
- availablity_365 - Number of days the booking are available

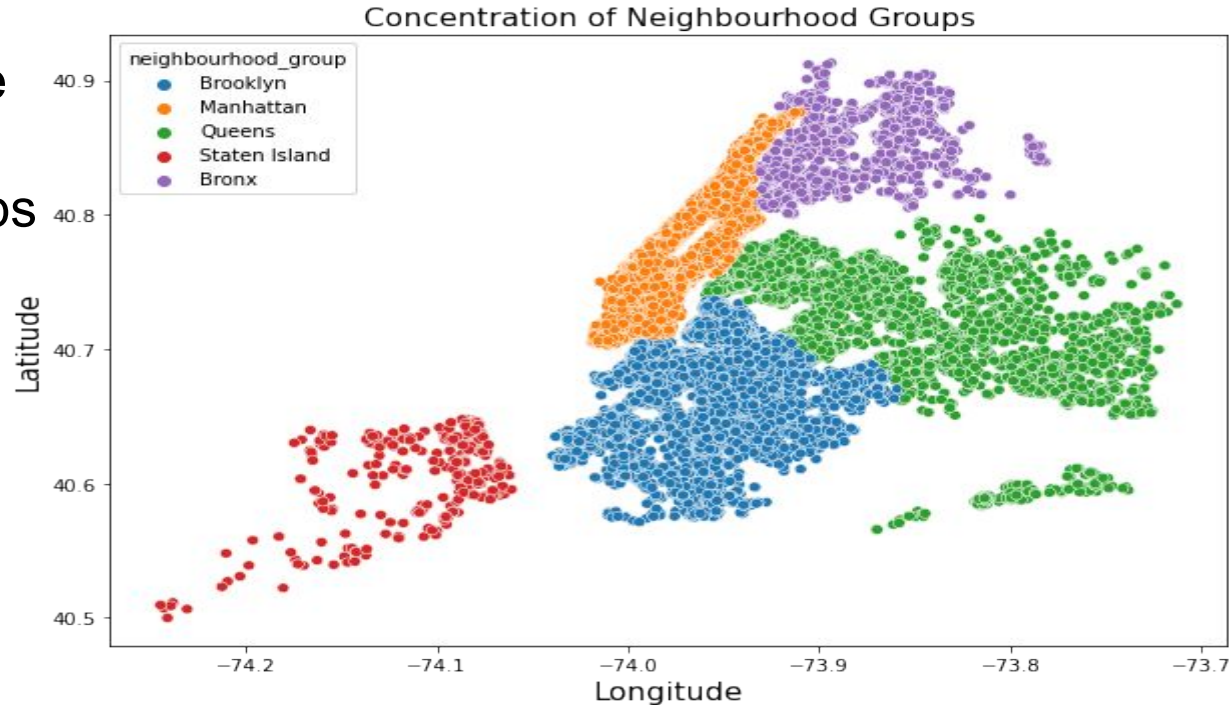


Why we need to Analysis Airbnb Booking ?

Since 2008, guests and hosts have used Airbnb to expand on traveling possibilities and present a more unique, personalized way of experiencing the world. Today, Airbnb became one of a kind service that is used and recognized by the whole world. Data analysis on millions of listings provided through Airbnb is a crucial factor for the company. These millions of listings generate a lot of data - data that can be analyzed and used for security, business decisions, understanding of customers' and providers' (hosts) behavior and performance on the platform, guiding marketing initiatives, implementation of innovative additional services and much more.

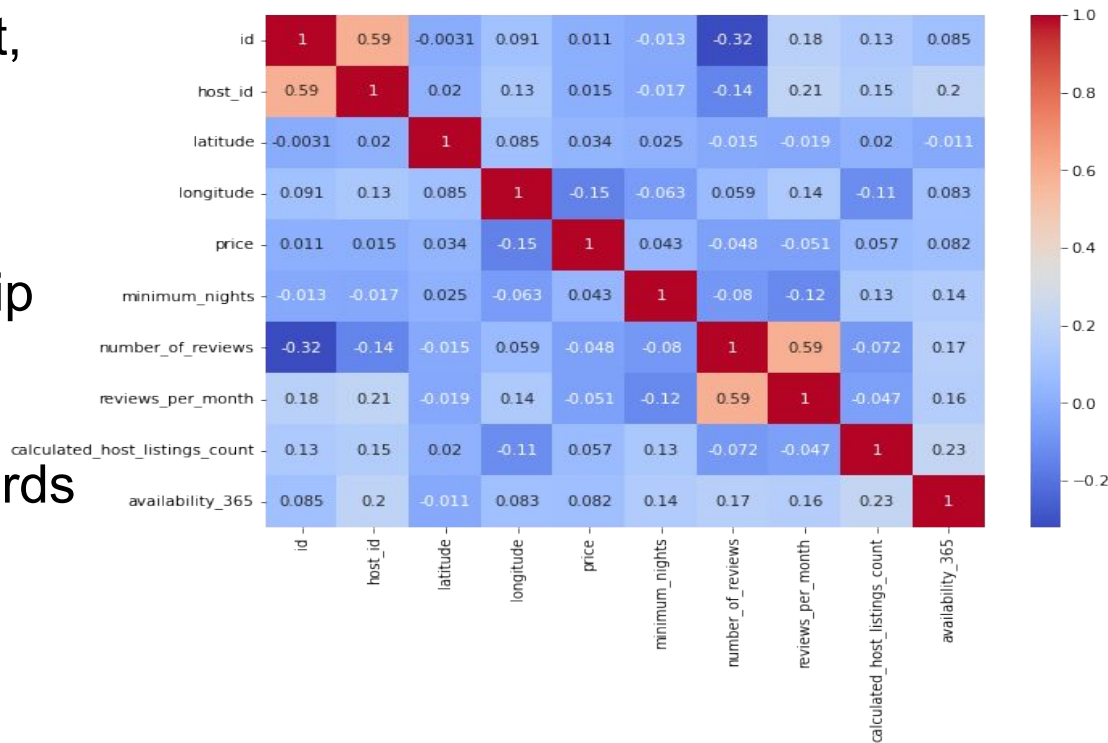
Neighbourhood group locations

- Here we can observe the different types of neighbourhood groups based on their location.
- We have five neighbourhood groups-Brooklyn, Manhattan, Queens, Staten Island and Bronx



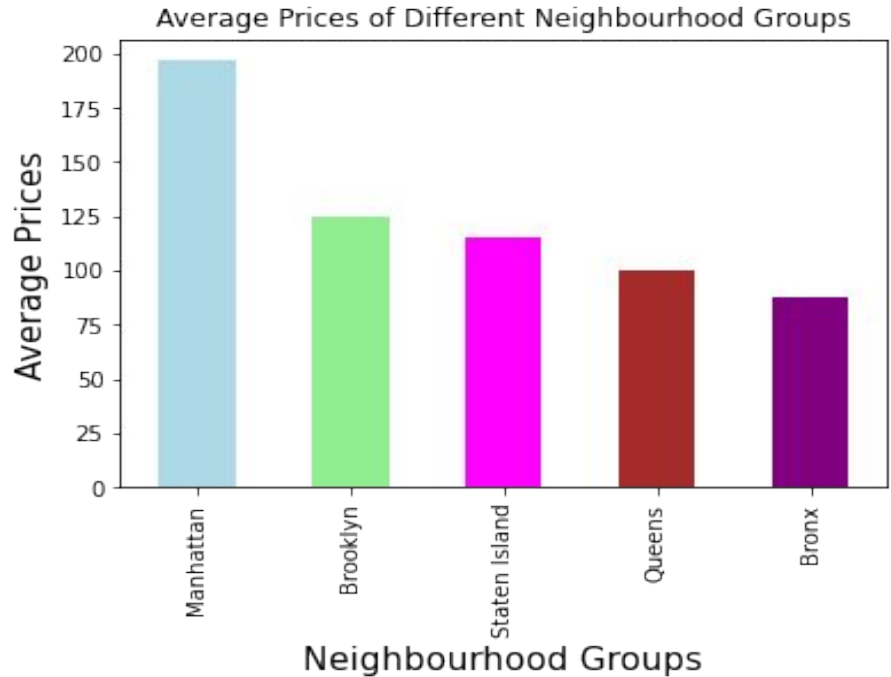
Correlation of Price with other independent variables

Based on the correlation plot, price does not have a strong relationship with any independent variables. Also, there is little to no relationship amongst independent variables. Thus we can streamline our analysis towards categorical data with independent variables



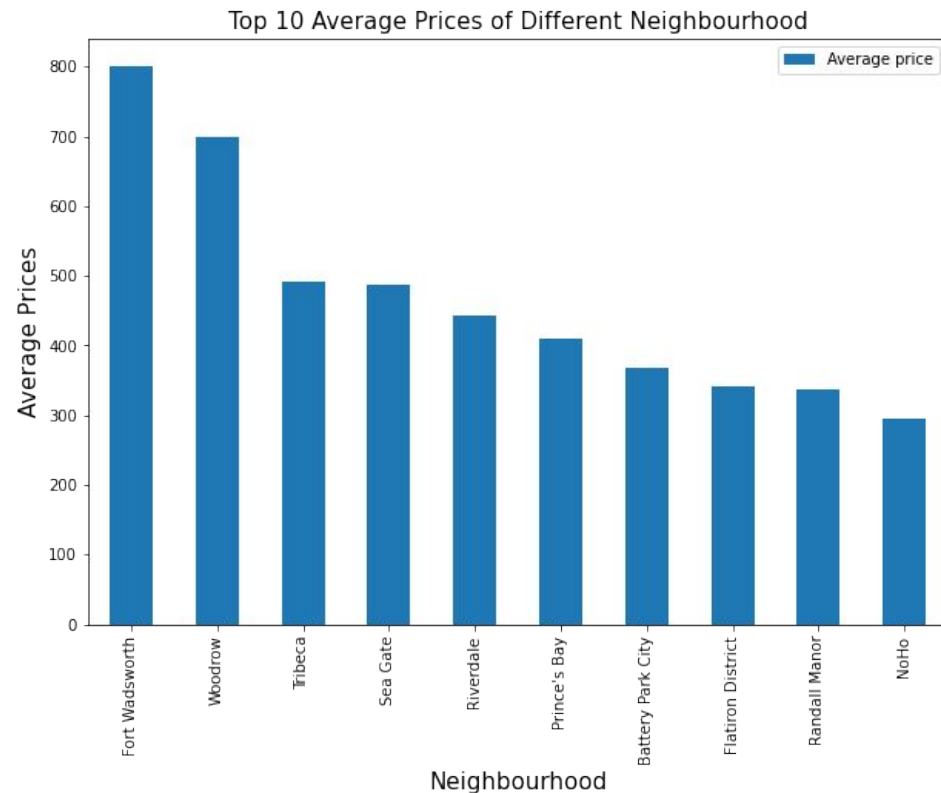
Price on different neighbourhood groups

- Here we can see that Manhattan has the highest average price (almost 200) in all neighbourhood groups.
- Brooklyn has the second highest average price with almost 125.
- Staten Island with average price 115.
- Queens with average price of 100.
- Bronx with minimum average price of 90.



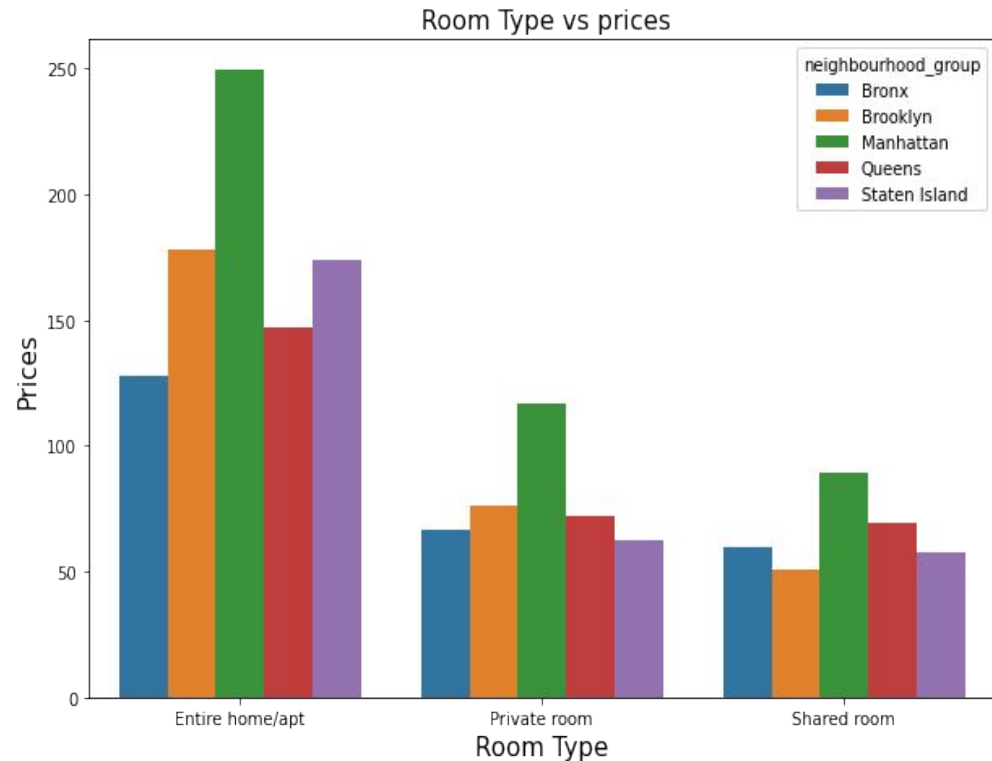
Top 10 neighbourhood

	neighbourhood	neighbourhood_group	Average price
0	Fort Wadsworth	Staten Island	800,000000
1	Woodrow	Staten Island	700,000000
2	Tribeca	Manhattan	490,638418
3	Sea Gate	Brooklyn	487,857143
4	Riverdale	Bronx	442,090909
5	Prince's Bay	Staten Island	409,500000
6	Battery Park City	Manhattan	367,557143
7	Flatiron District	Manhattan	341,925000
8	Randall Manor	Staten Island	336,000000
9	NoHo	Manhattan	295,717949



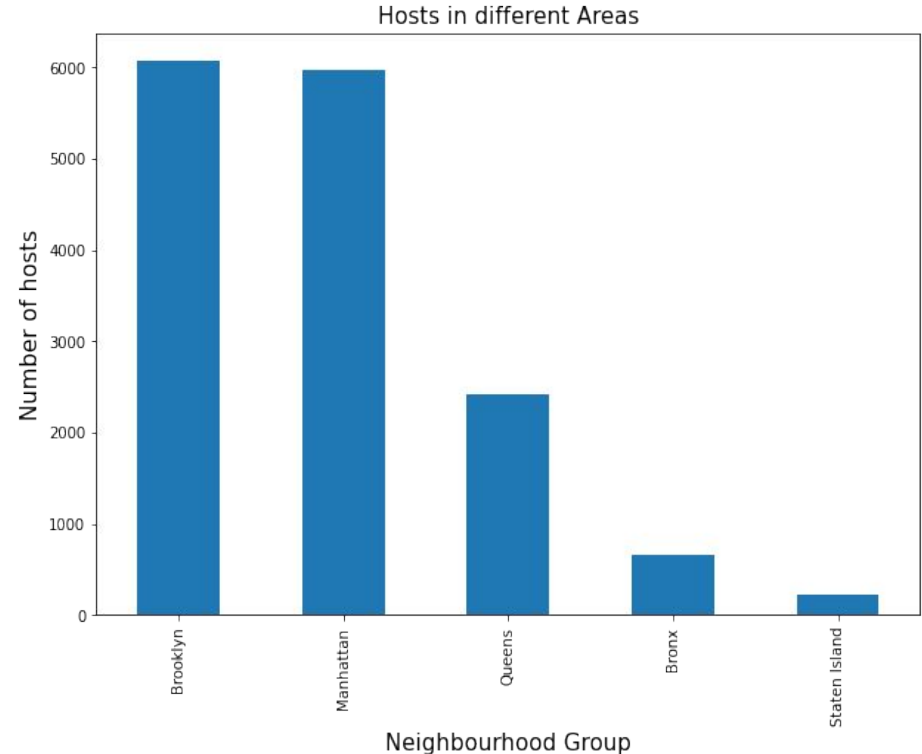
Price on different room type

- Here we can see that Entire home/apt. has the highest price in all room types.
- Private room are slightly costlier than the Shared room
- Manhattan has the highest price in all neighborhood and in all room type.



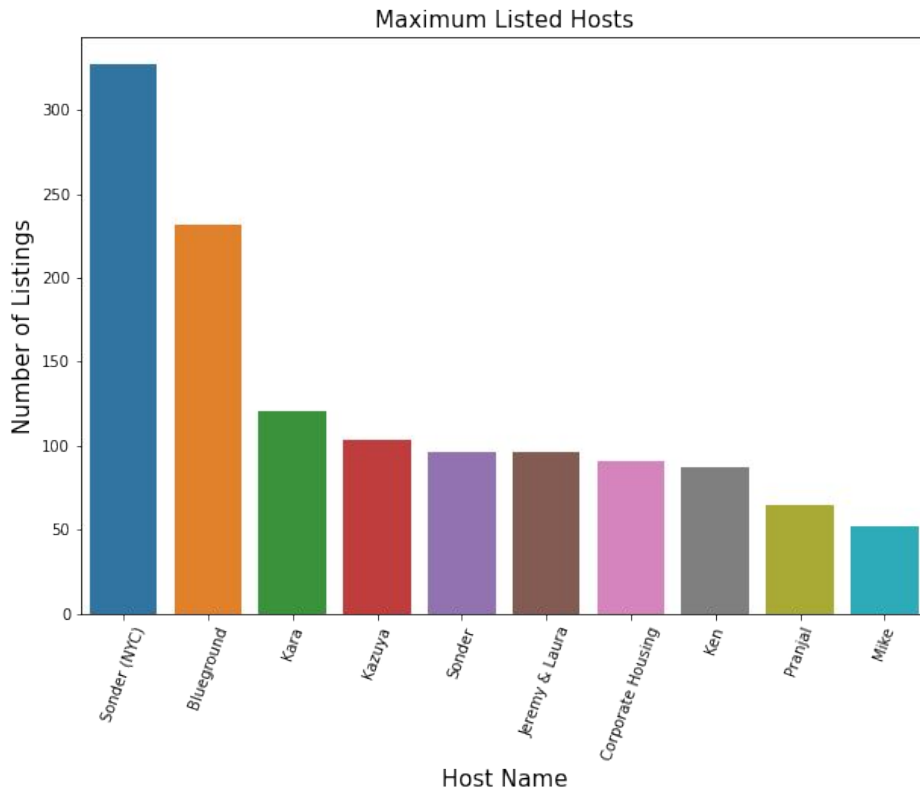
Hosts in different areas

- Brooklyn and Manhattan have the highest number of host in all neighbourhood groups
- Queens have around 2000 hosts
- Bronx and Staten Island have the least number of hosts



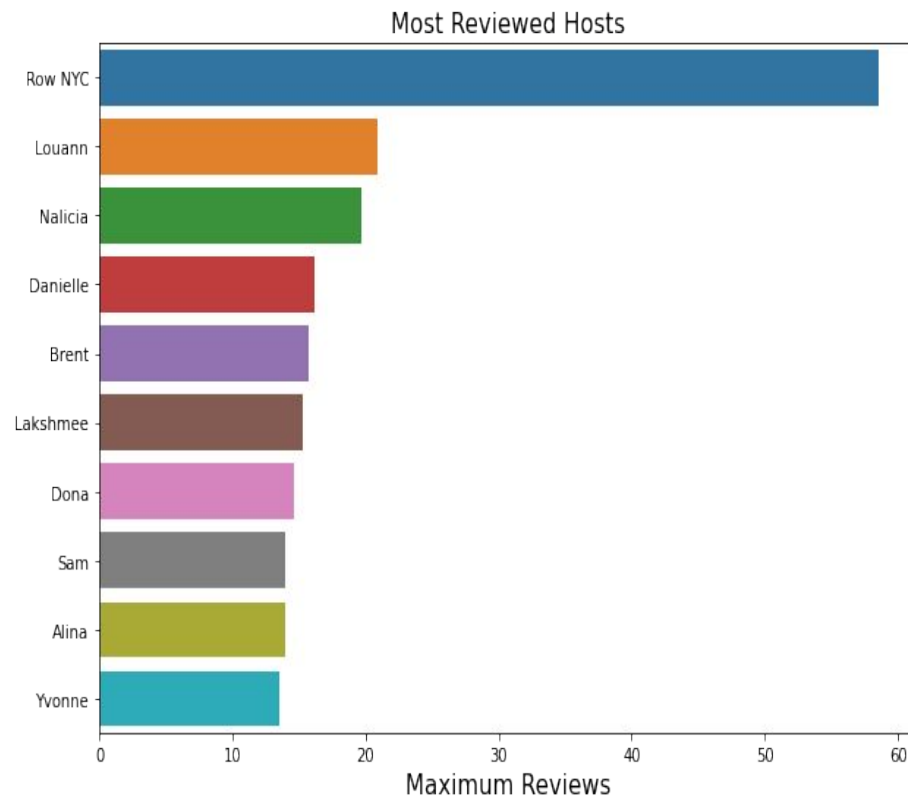
Busiest host

- So, Sonder(NYC) is the most listed host with more than 300 listing.
- Second highest listed host is Blueground with more than 200 listing.
- Third highest listed host is Kara with 121 numbers of listing .

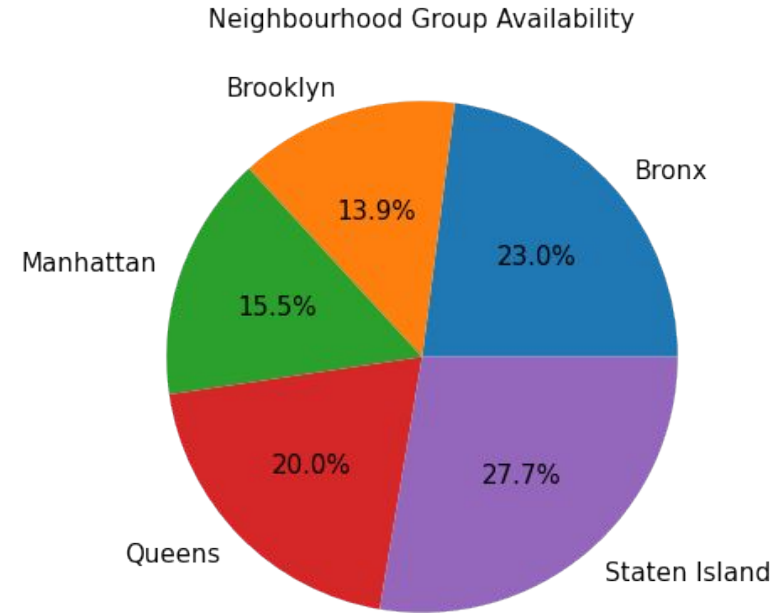
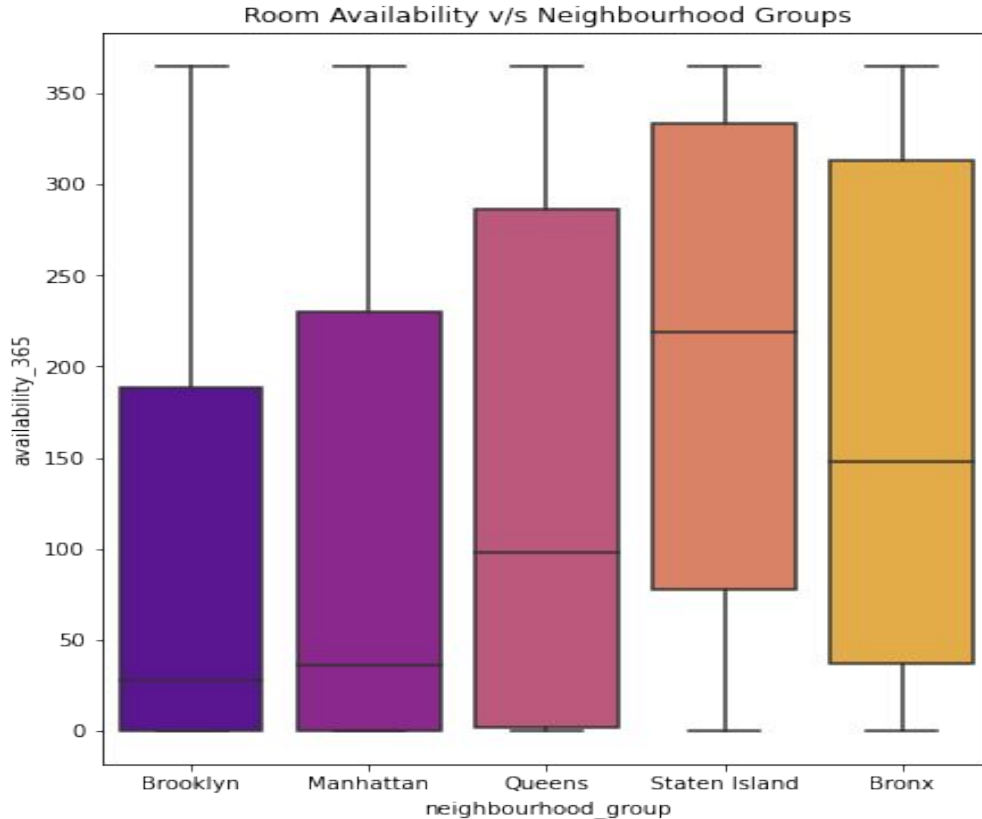


Most reviewed host

	host_name	max_reviews_per_month
0	Row NYC	58,50
1	Louann	20,94
2	Nalicia	19,75
3	Danielle	16,22
4	Brent	15,78
5	Lakshmee	15,32
6	Dona	14,58
7	Sam	14,00
8	Alina	14,00
9	Yvonne	13,48

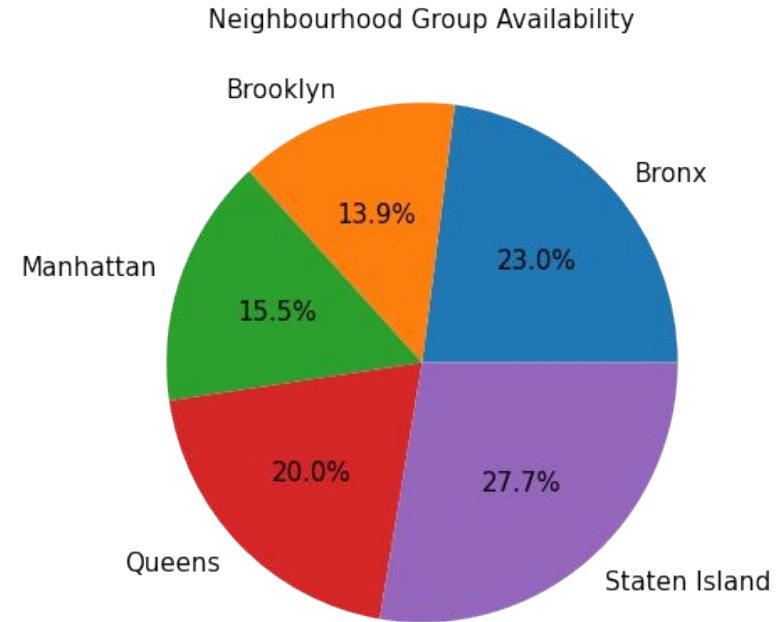


Neighbourhood group and their availability



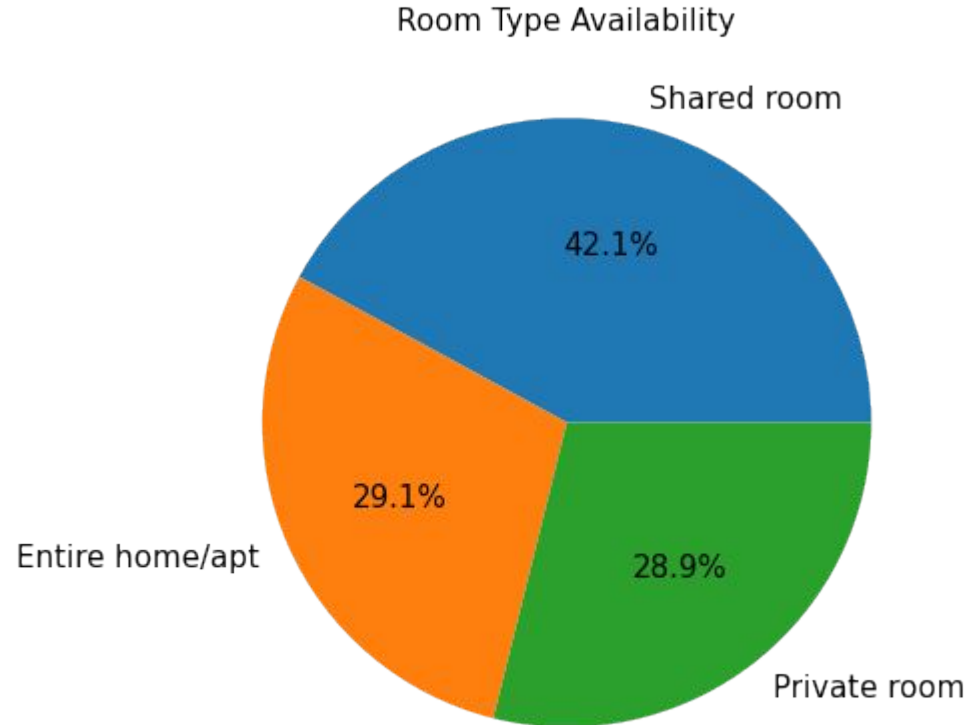
Neighbourhood group and their availability

- So, here we can see that the availability of Staten Island is highest which is 27.7% in all neighbourhood group.
- The availability of Bronx is 23% .
- The availability of Queens is 20%.
- The availability of Manhattan is 15.5%
- At last we have almost 14% availability for Brooklyn.



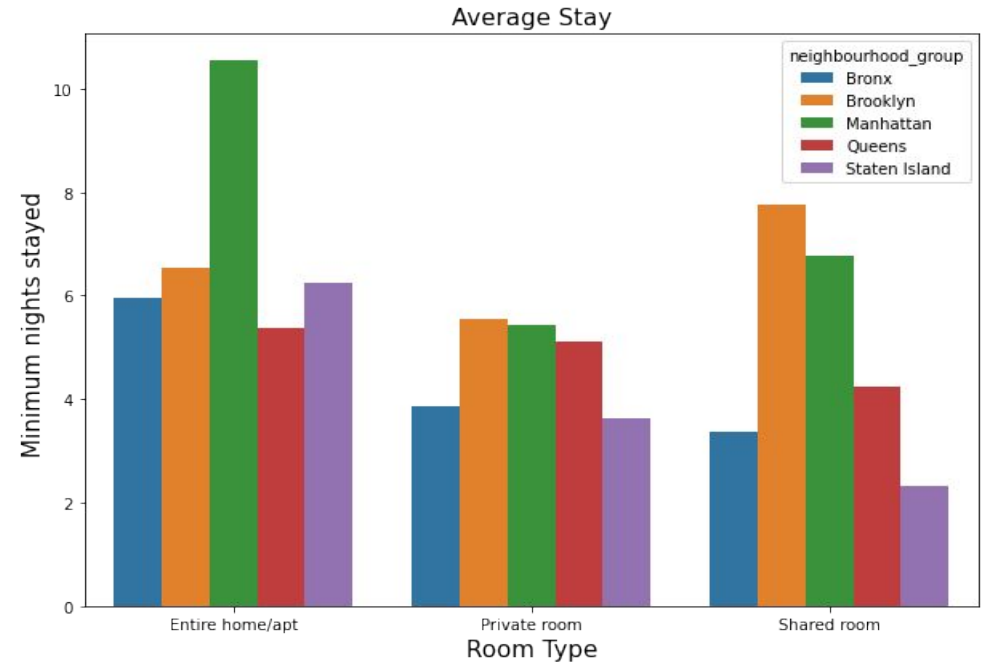
Room type and their availability

- Shared rooms have an availability of over 42% making it the most available room type.
- Entire home/apts and Private rooms are almost 29% available.



Average stays in room type

- So people generally prefer to stays in Entire Home/apt. with average of 8 days.



Conclusions

- Most Airbnb services is located in Manhattan and Brooklyn.
- Manhattan has the highest mean price almost 200 dollars.
- Bronx having minimum mean price around 90.
- Fort Wadsworth (Staten Island) has the highest room price among all neighbourhoods.
- Entire home/apt has the highest price in all room types.
- Queens and Staten Island have the maximum traffic among all.

Conclusions

- Manhattan and Brooklyn have a maximum number of hosts
- Sonder(NYC) is the most listed host with more than 300 listing.
- Row NYC is the most reviewed host with more than 50 reviews per month.
- Shared room available 42% of the time which is highest in all room type.
- Queens and Staten Island have the maximum traffic among all.

Thank you