

# Capstone Project - 1

## Airbnb Booking Analysis

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# Content

- Data Summary
- Business Perspective
- Problem Statement
- Analysis of Problems
- Challenges
- Conclusion

# Data Summary

## **Dataset – Airbnb Booking Analysis**

**After data cleaning we have 48895 rows and 16 columns**

We are dealing with following columns –

‘id’, ‘name’, ‘host\_id’, ‘host\_name’, ‘neighbourhood\_group’, ‘neighbourhood’, ‘latitude’, ‘longitude’, ‘room\_type’, ‘price’, ‘minimum\_nights’, ‘number\_of\_reviews’, ‘last\_review’, ‘reviews\_per\_month’, ‘calculated\_host\_listings\_count’, ‘availability\_365’

# Business Perspective

- Airbnb makes money by charging guests and hosts for short-term rental stays in private homes or apartments booked through the Airbnb website. The short-term rental business has seen good growth in the past decade.
- A marketing mix is a marketing model used to appraise the effectiveness of the different marketing strategies combined.
- Airbnb's goal for guests is to enrich travel by providing accommodations with character.
- Instead of living in cookie-cutter hotel rooms, you can enjoy a space with personality and character.
- Airbnb is a popular service for travelers, but as a company, it serves two markets: guests and hosts.

# Business Perspective

Airbnb mainly focus on

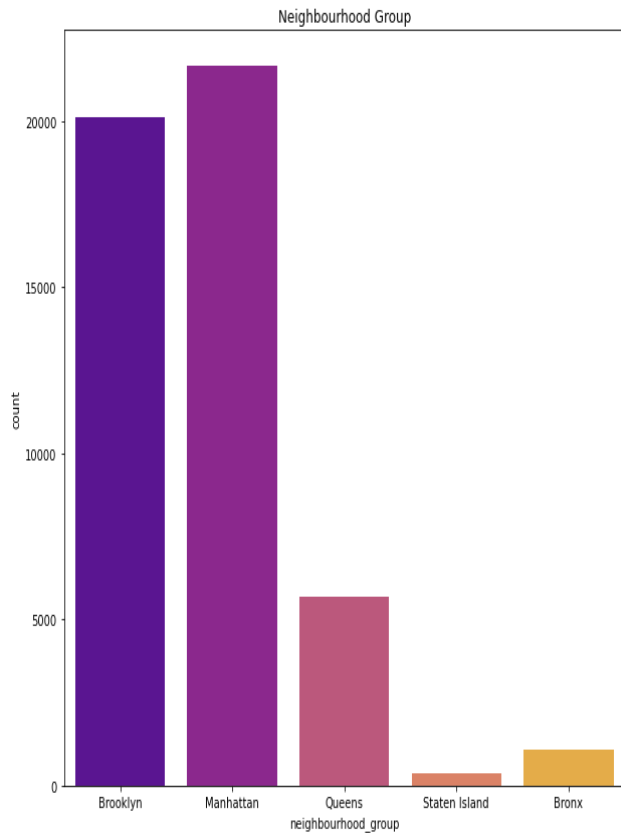


# Problem Statement

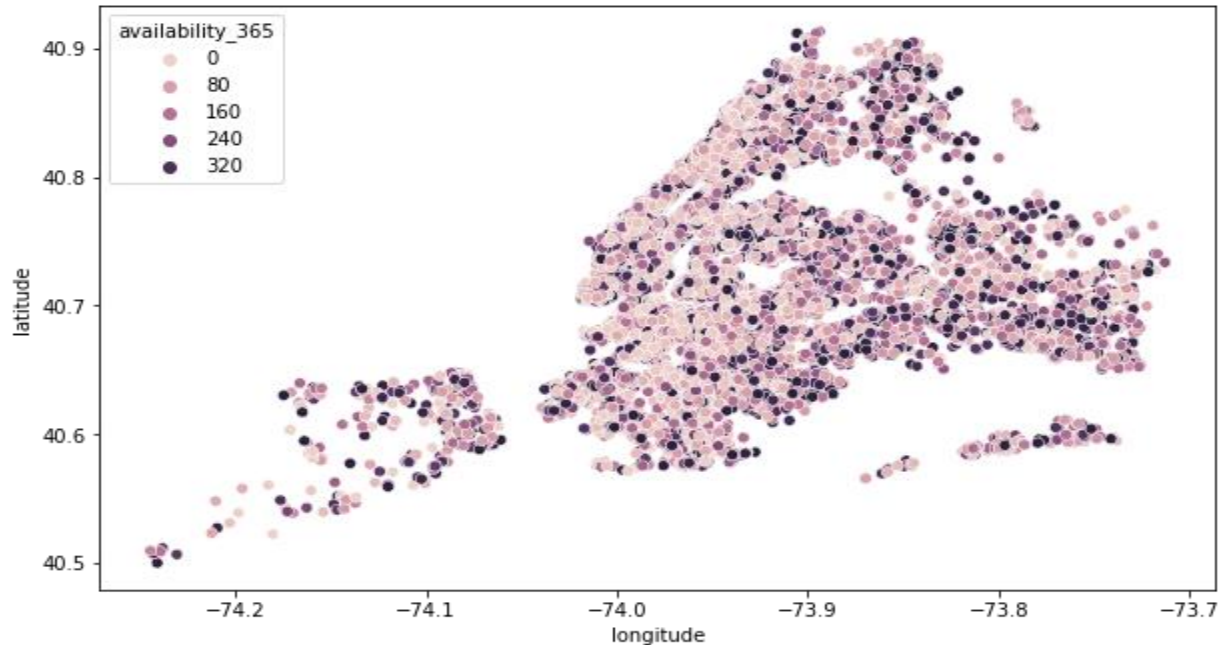
- What are all neighbourhood groups with among most highest counts ?
- What are availability of number of days for room when listing is available for bookings ?
- Analysis based on room type.
- Analysis of the neighbourhood group based on Latitude and Longitude.
- What are Price Exploration ?
- What are price based on the Availability 365
- Relation between neighbourhood group and availability of number of days for room
- How much property owned by each neighbourhood groups ?
- Property distribution on room type
- Correlation to understand the relation of each data.

# Analysis of Problems

What are all neighbourhood groups ?



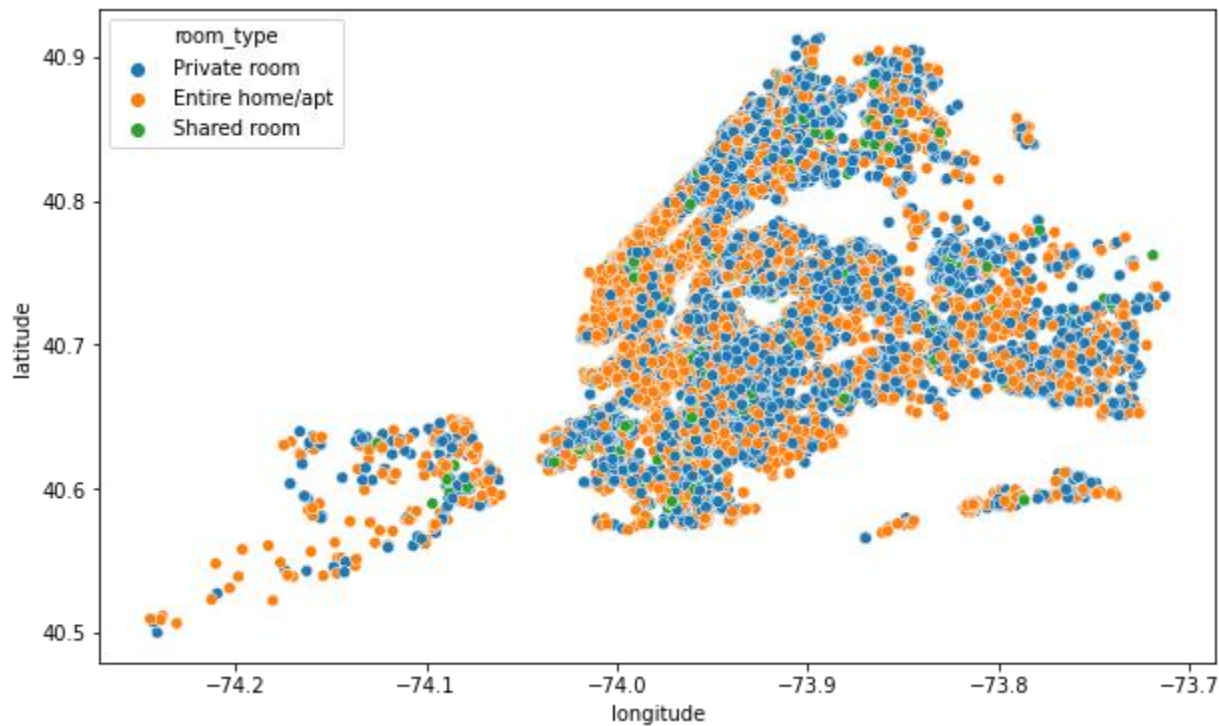
What are availability of number of days for room when listing is available for bookings ?



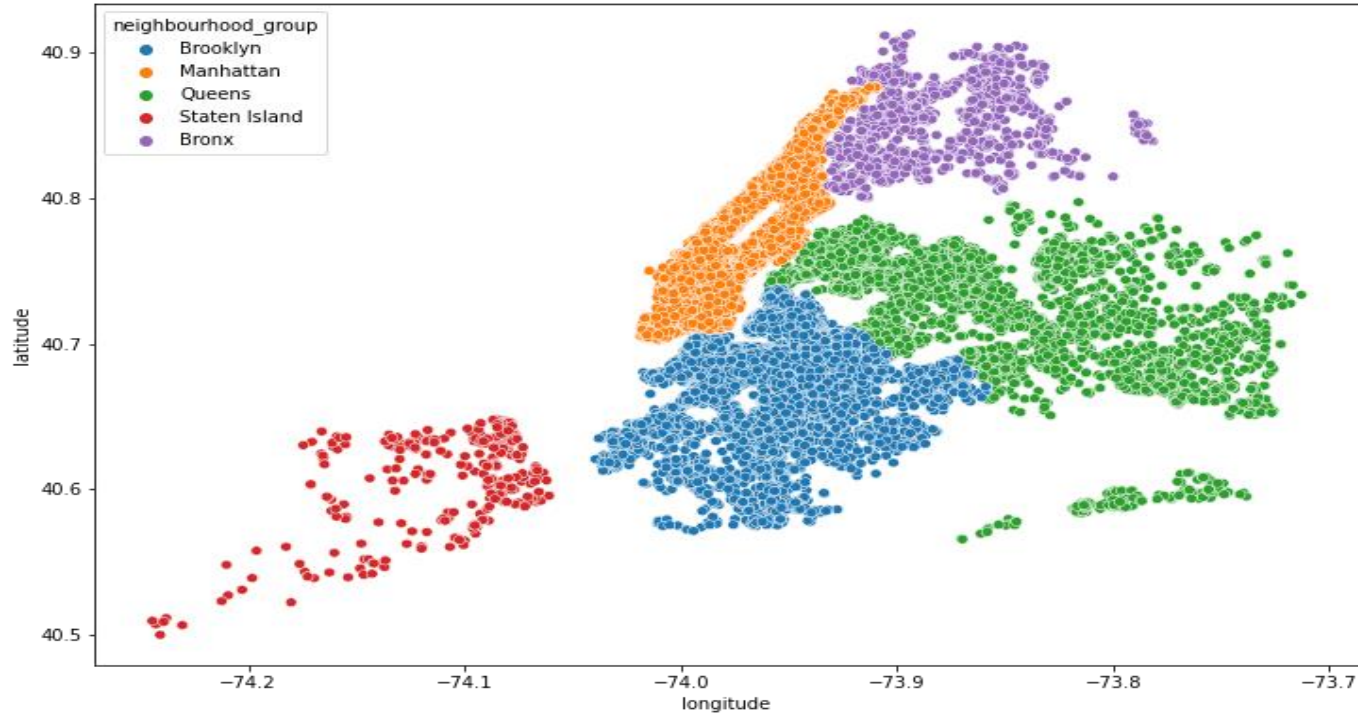
**Availability of number of days for room is quite vary in latitude and longitude.**



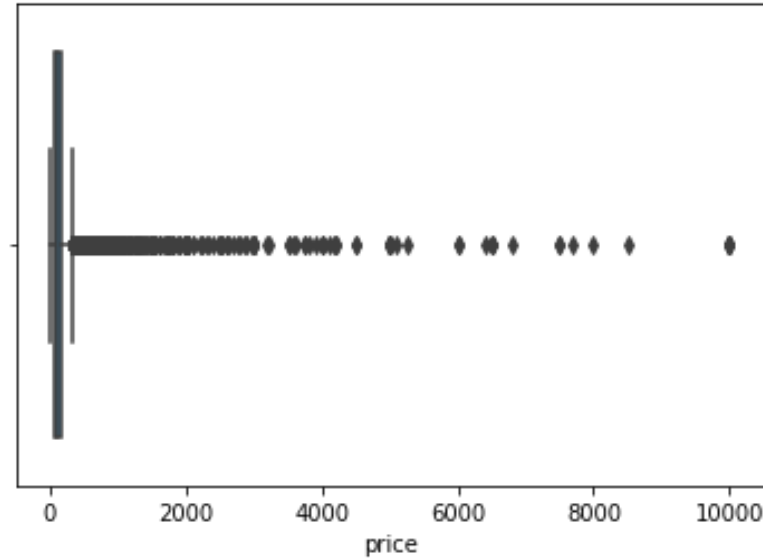
## Analysis based on room type



## Analysis of the neighbourhood group based on latitude and longitude

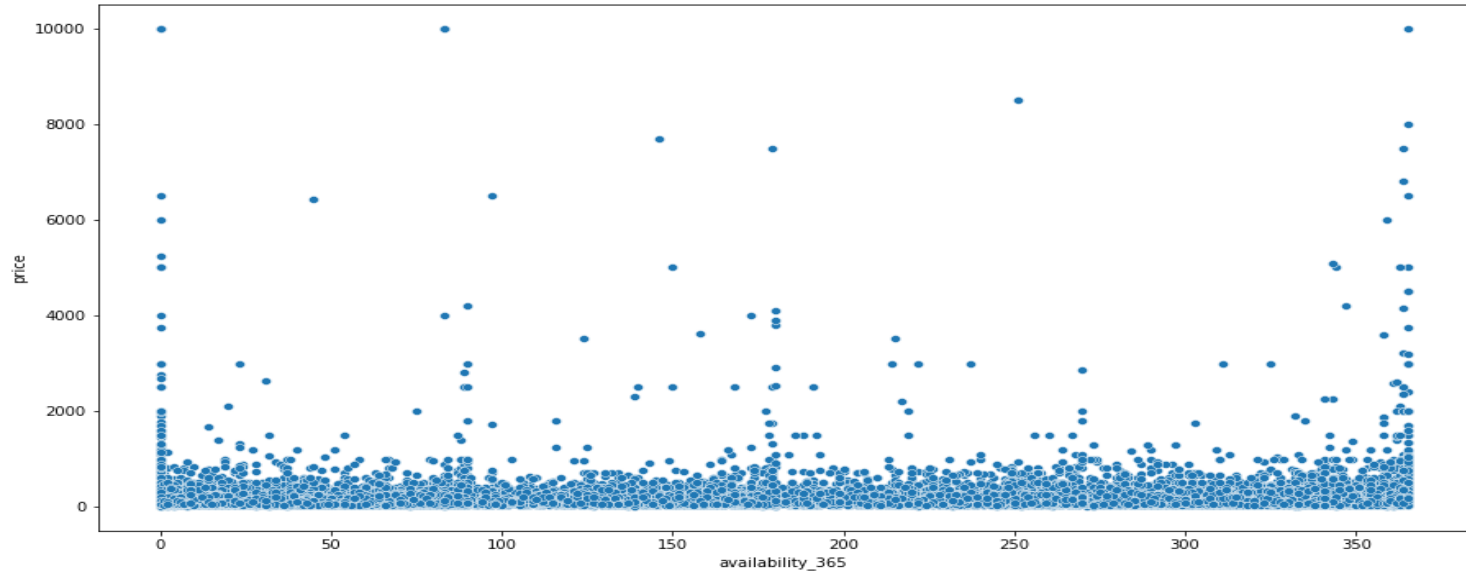


What are price exploration ?



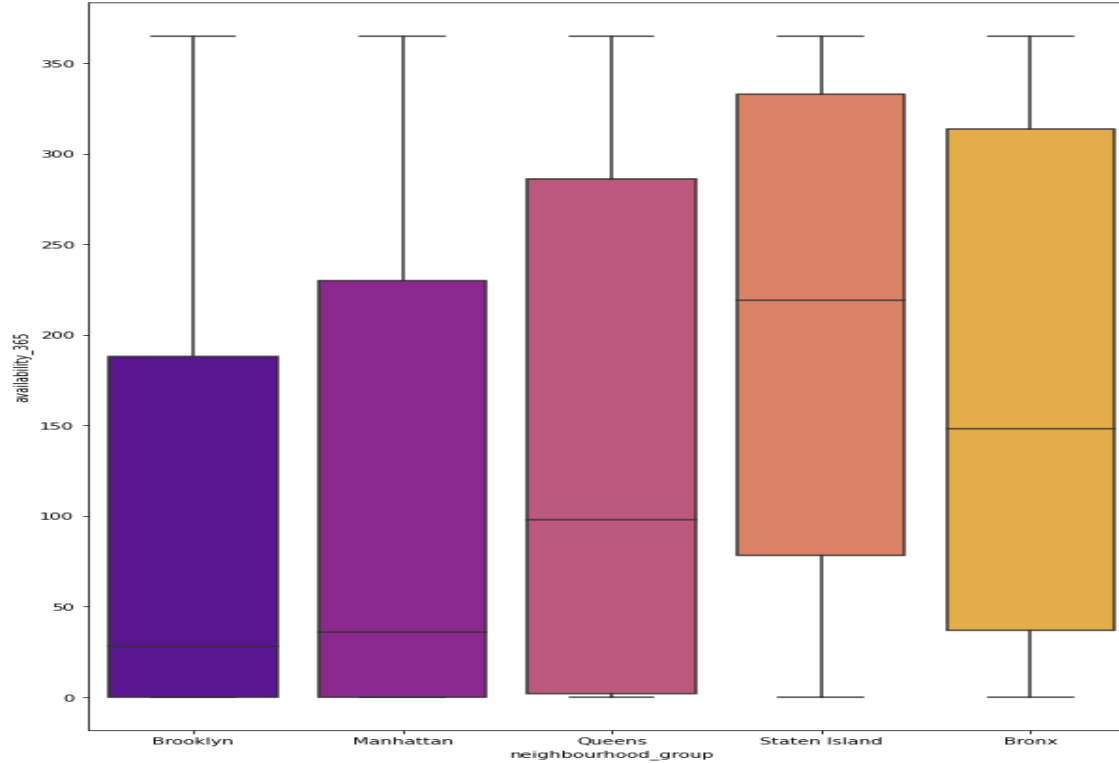
From above box plot we can understand that data is spread out for high ranges for the price irrespective of the region.

## What are the price based on the availability 365



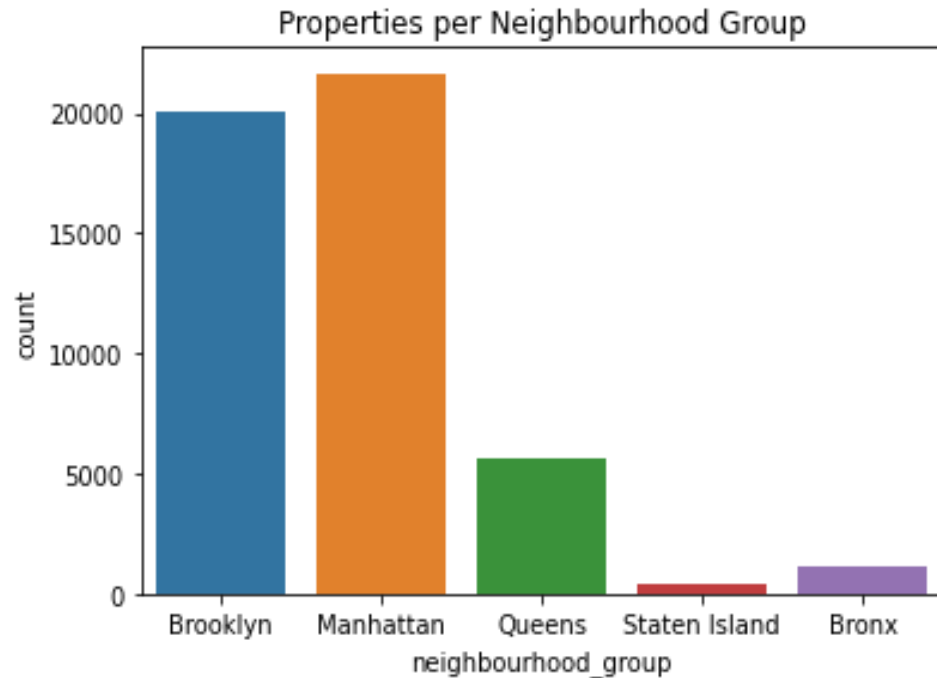
The price increased based on availability and looking below the plot is hardly to infer. But looks like with availability with 365 the price increases to 10k.

## Relation between neighbourhood group and availability of number of days for room

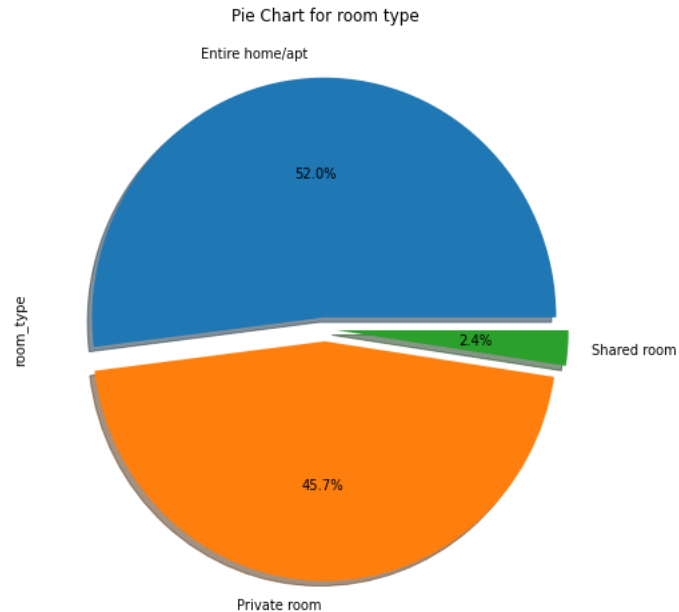
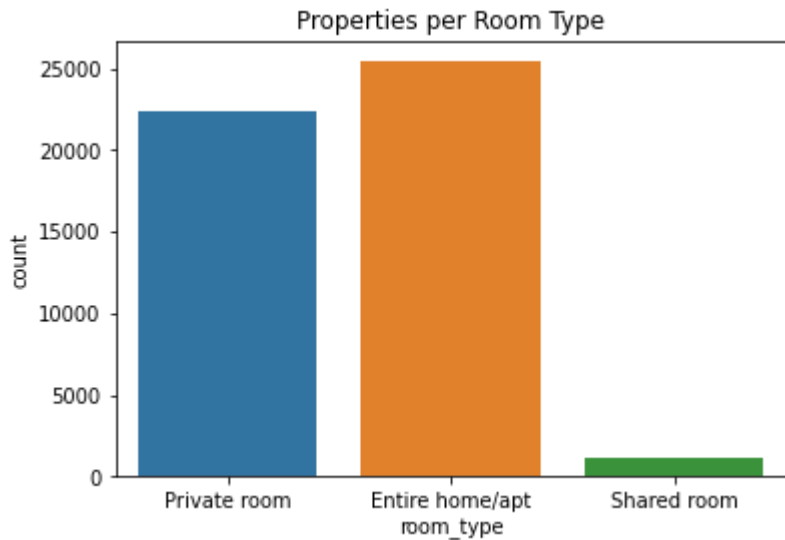


All this in comparison makes a lot of difference is in Staten Island with Q1 with 75 available and Q3 with 325. The median show 220.

How much property owned by each neighbourhood group ?

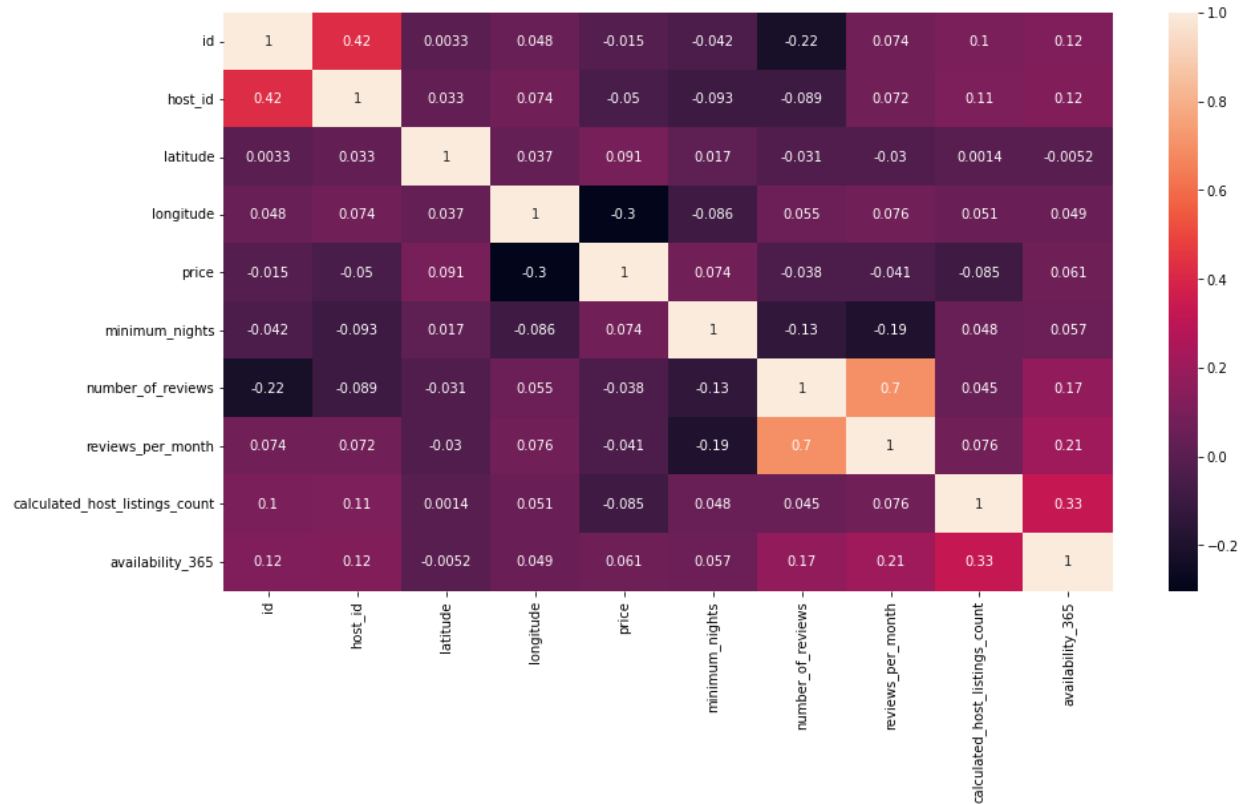


## Property distribution on room type



As per analysis 'Entire home/apt' has the highest properties as per room type. It can possible that people don't prefer 'Shared room'.

## Correlation to understand relation of each data





# Challenges

- Identifying various different problem statement.
- Analysis of perfect problem with different graphs and plots.
- Understand how data is been used in business strategy.
- Difficult to understand some column.

# Conclusion

- I've conclude some aspects related to Airbnb booking analysis right from every perspective till some ends.
- By all this we can see Manhattan and Brooklyn has highest number count in neighbourhood group as compared to others.
- The more number of distribution can be observe in latitude above 40.50 to 40.91 and longitude ranging from -74.16 till -73.88.
- As per room type – Private room and Entire home/apt is preferred by the people.
- There are very low people to afford up to price till 10k but most popularity in price exploration is from range 0 – 5k. Some of them also prefer above 5k too.

# Conclusion

- Availability 365 and neighbourhood group shows how the number of days were available for bookings in different five types region. The most minimum available is for Brooklyn and Manhattan which is Q1 of 25% shows of zero value but for Brooklyn Q3 is nearly 185 and for Manhattan Q3 is nearly 230. It also shows vary in median too.
- Manhattan and Brooklyn has the highest count above 20k in property owning.
- But at last by all analysis and research it is been clear that shared room is not in highly recommendation to any people.

Thank You