

Capstone Project

Airbnb Booking Analysis

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Contents

- About the Project
- Overview of the dataset
- Exploratory Data Analysis
- Conclusion

About the project

This is the first capstone project called Airbnb booking analysis. With this project i am implementing what I have learnt during the course.

This project tell us the various trend about Airbnb bookings in the city of New York.

Since these types of staying services have become in demand due to its unique way and personalized way of experiencing the world.

By analysing the given dataset we can gain meaningfull insights about the trends of people and make important business decisions

About Airbnb

Airbnb, Inc. is an American company that operates an online marketplace for lodging, primarily homestays for vacation rentals, and tourism activities. Based in San Francisco, California. Since 2008, it has grown in popularity and specially for those community which frequently travel. It is becoming a strong competitor to the hotel industry.

It has millions of listing, which generate lots of data.

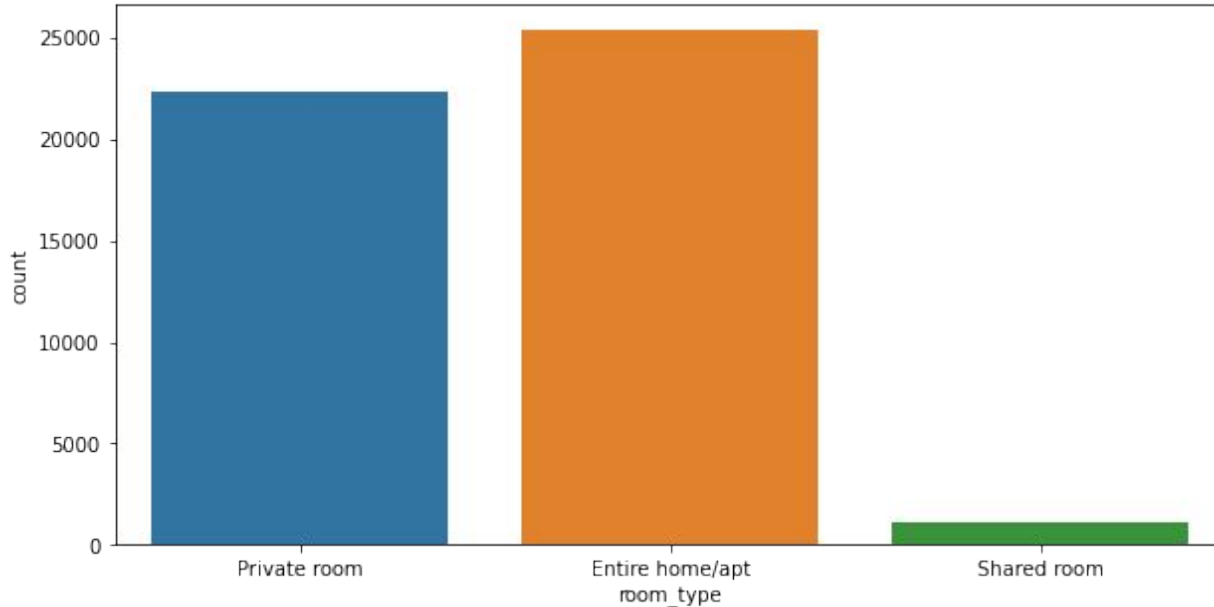
We are analyzing these data for making business decision, for people who are looking best room type.

Overview of the dataset

Our dataset is csv file consisting of 16 columns and 48895 rows.
after cleaning we have 14 columns they are:

- * id
- * name
- * host_id
- * host_name
- * neighbourhood_group
- * neighbourhood
- * latitude
- * longitude
- * room_type
- * price
- * minimum_nights
- * number_of_reviews
- * reviews_per_month
- * availability_365

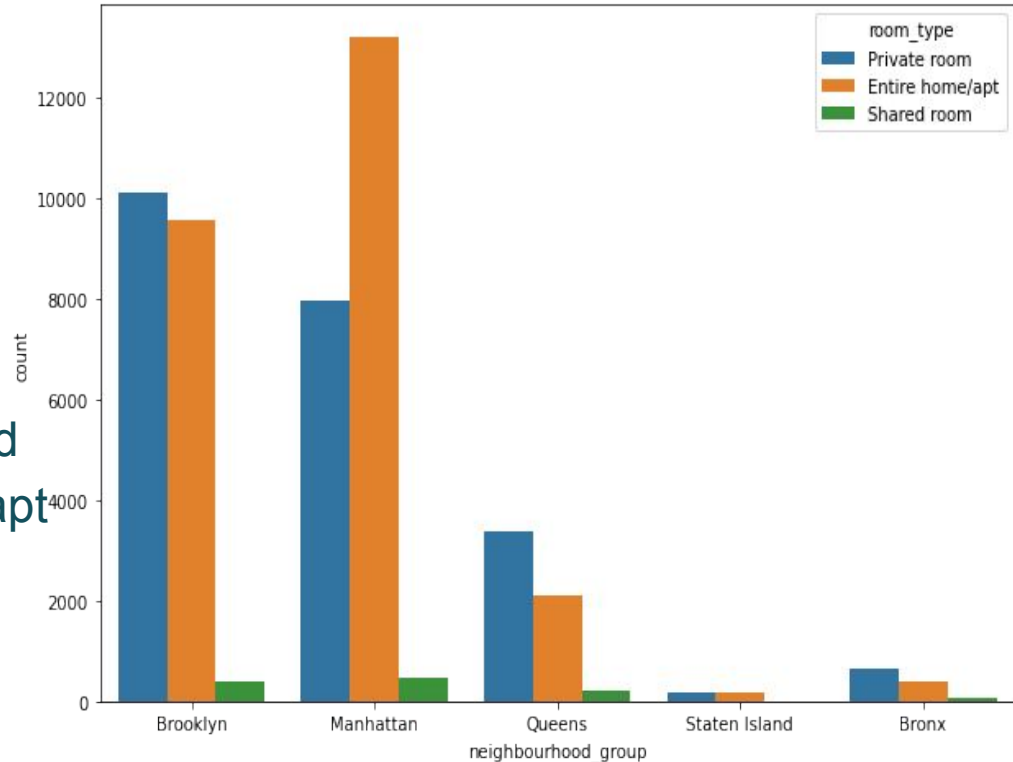
What type of rooms did most people preferred?



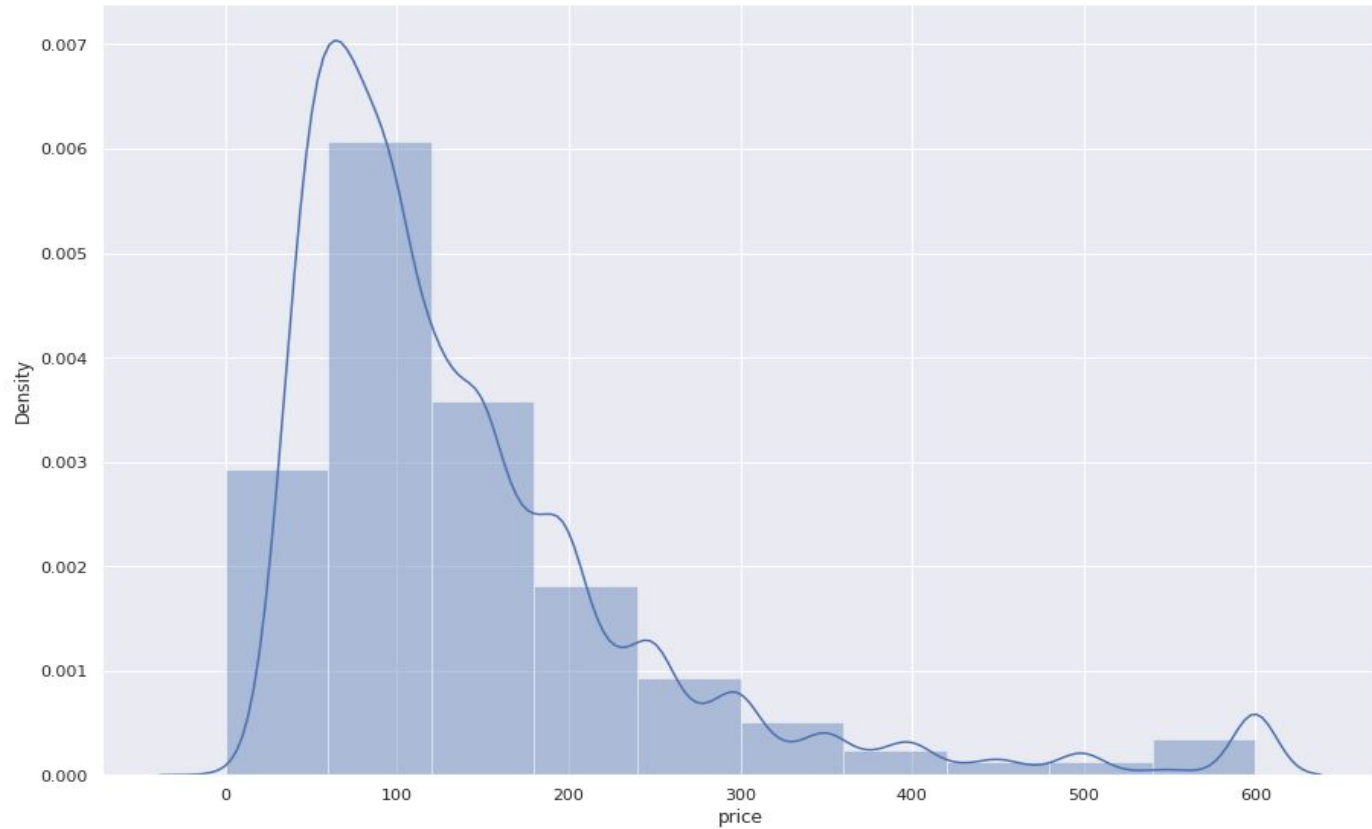
- * In New York, popular type of rooms is the Home/Apartment type rooms, followed by Private rooms.
- * And least popular type of rooms is the shared room type

Popular rooms in each neighbourhood?

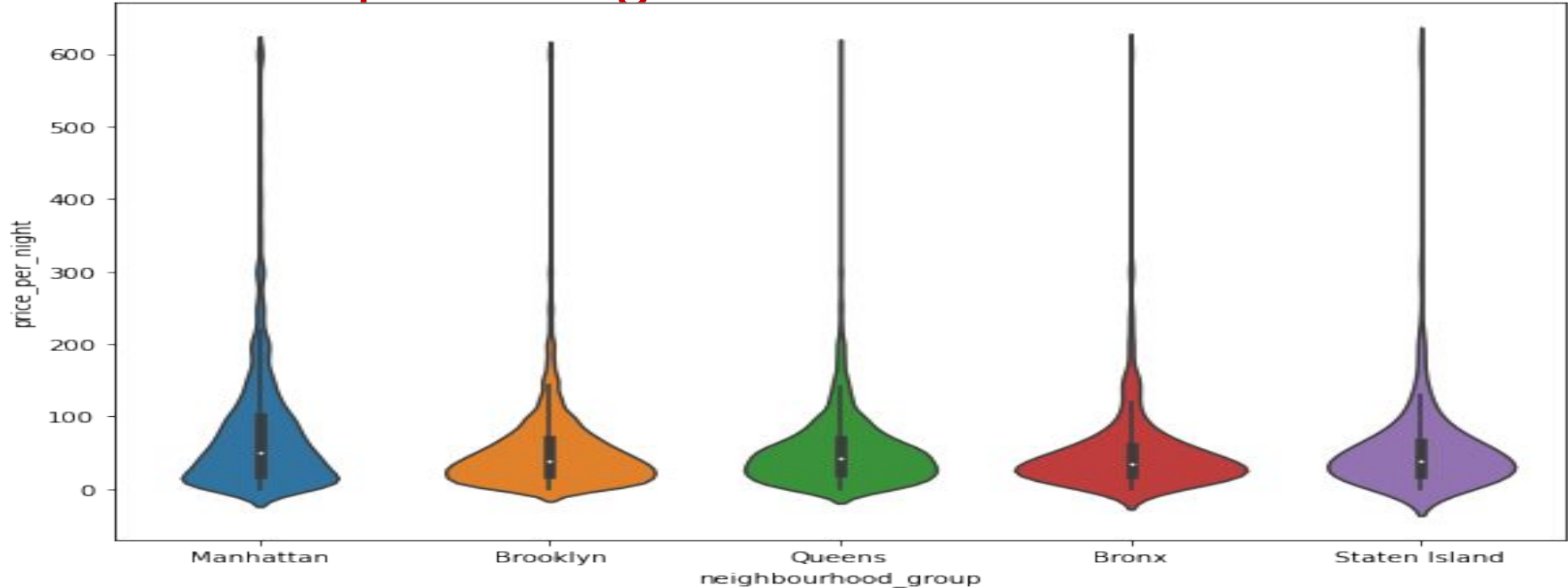
- * In Manhattan people preferred Home/apartment rooms.
- * In Brooklyn majority of the people preferred Private room
- * In Queens most preferred Private rooms then the other
- * In Staten Island people preferred both Private rooms and Home/apt type rooms
- * In Bronx people prefer Private room type.



Price distribution in New York



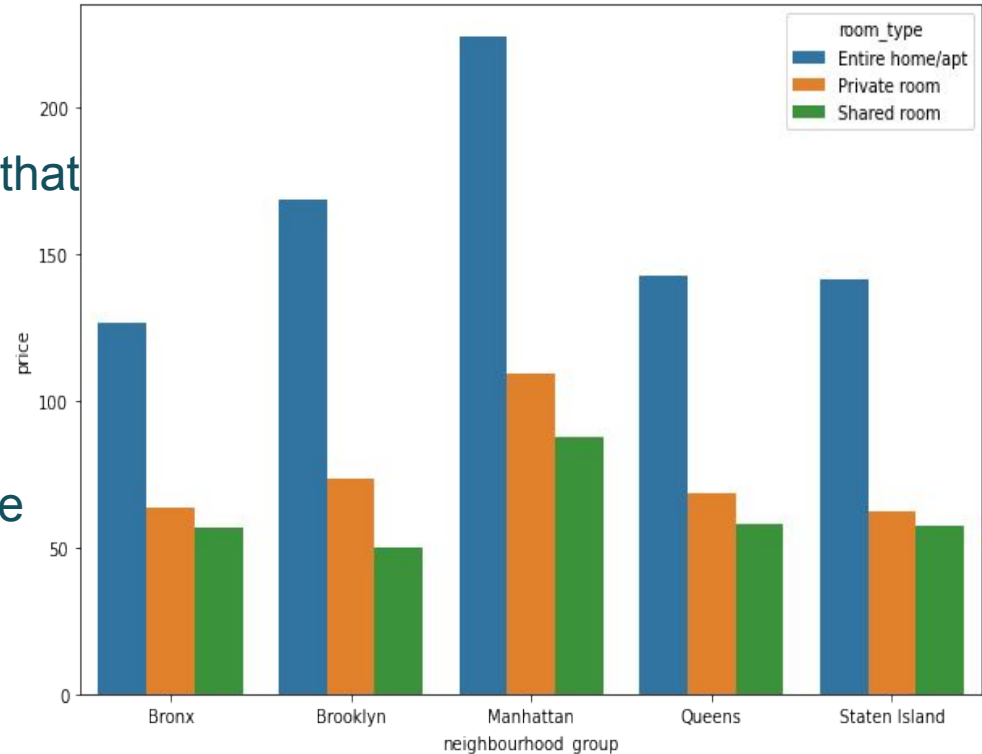
What is the price range of the most rooms?



- * for the above violine graph we can observe that distribution is
 - => Manhattan > Brooklyn > Staten Island > Queens > Bronx.
- * While the Manhattan is the costliest neighbourhood
 - and the Bronx is the cheapest neighbourhood
- * Which means People are willing to pay more at Manhattan then Bronx

For which type of room will people pay the most?

- * Most people Pay and prefer to Home/Apartment rooms
- * From the graph we can observe that from the whole neighbourhood people are willing to pay more for a Home/Apartment room than any other
- * the second most for which people pay more is the the Private room



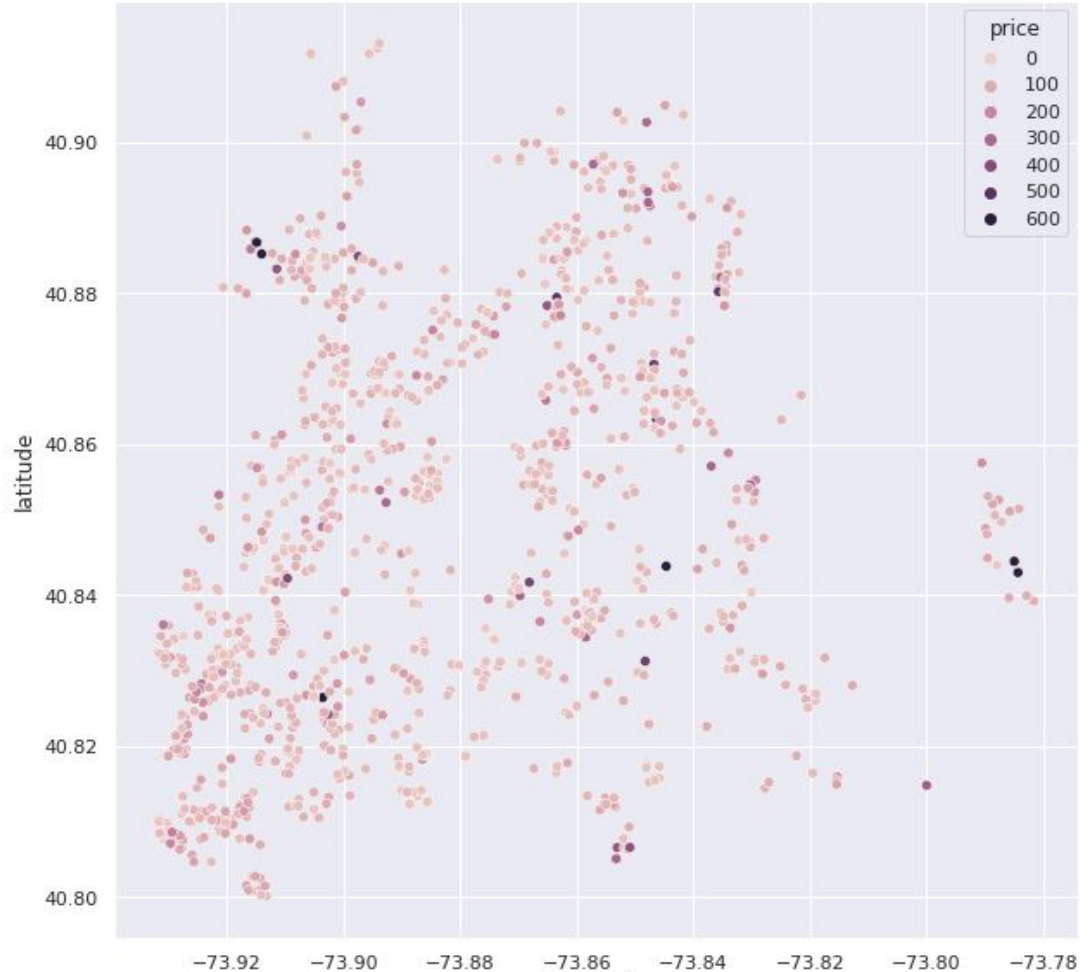
Highest paid Neighbourhood

- * We can observe from the map that people are willing to pay more at **Mantattan** then any other neighbourhoods
- * Here the highest paid range are at 600 dollars and more which are highlighted in black

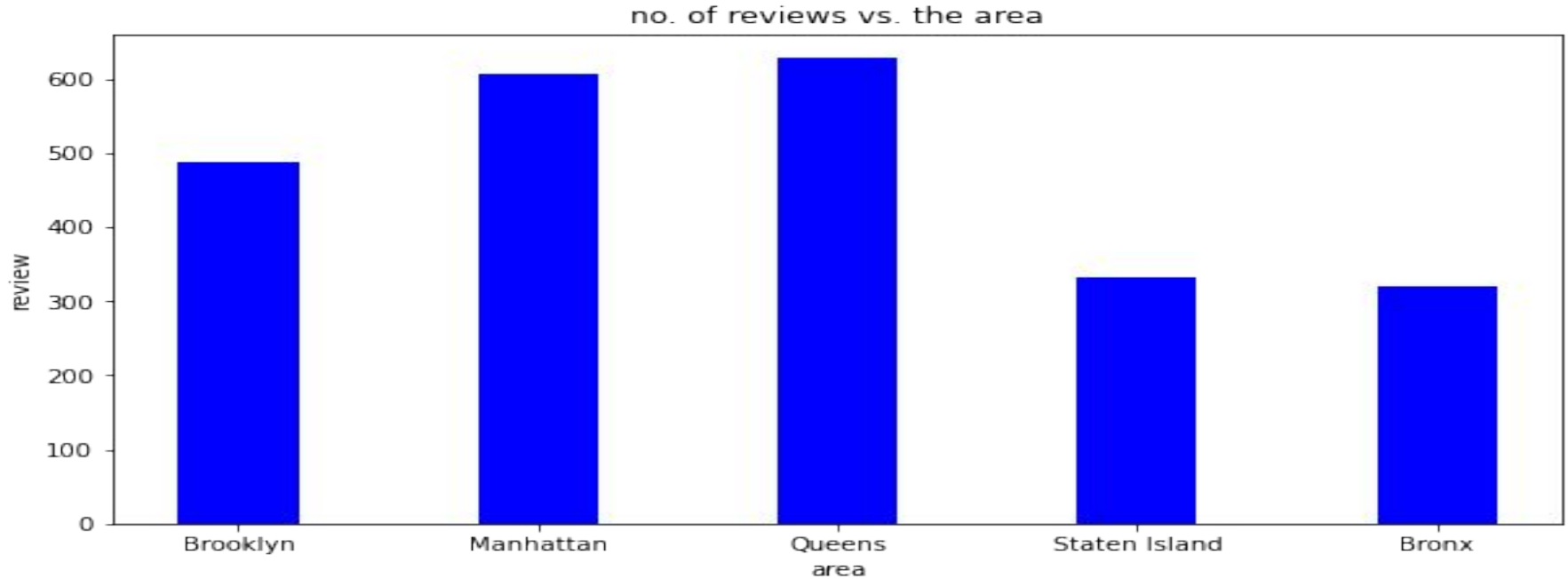


Lowest paid Neighbourhood

* We can observe from the map that people are willing to pay less at **Bronx** than any other neighbourhood

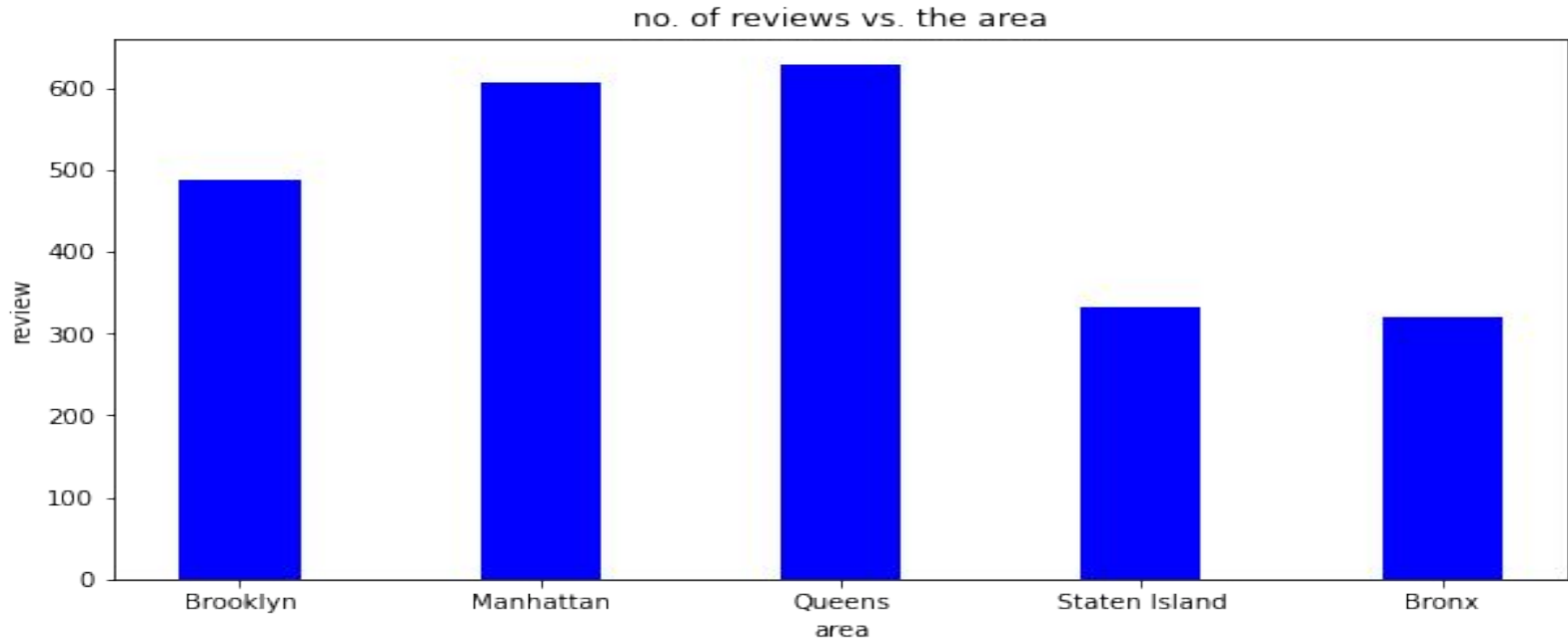


What Reviews by people tell us?



* we can see Queens has the most reviews by the people, with more than 600 reviews and the next with most review is Manhattan.

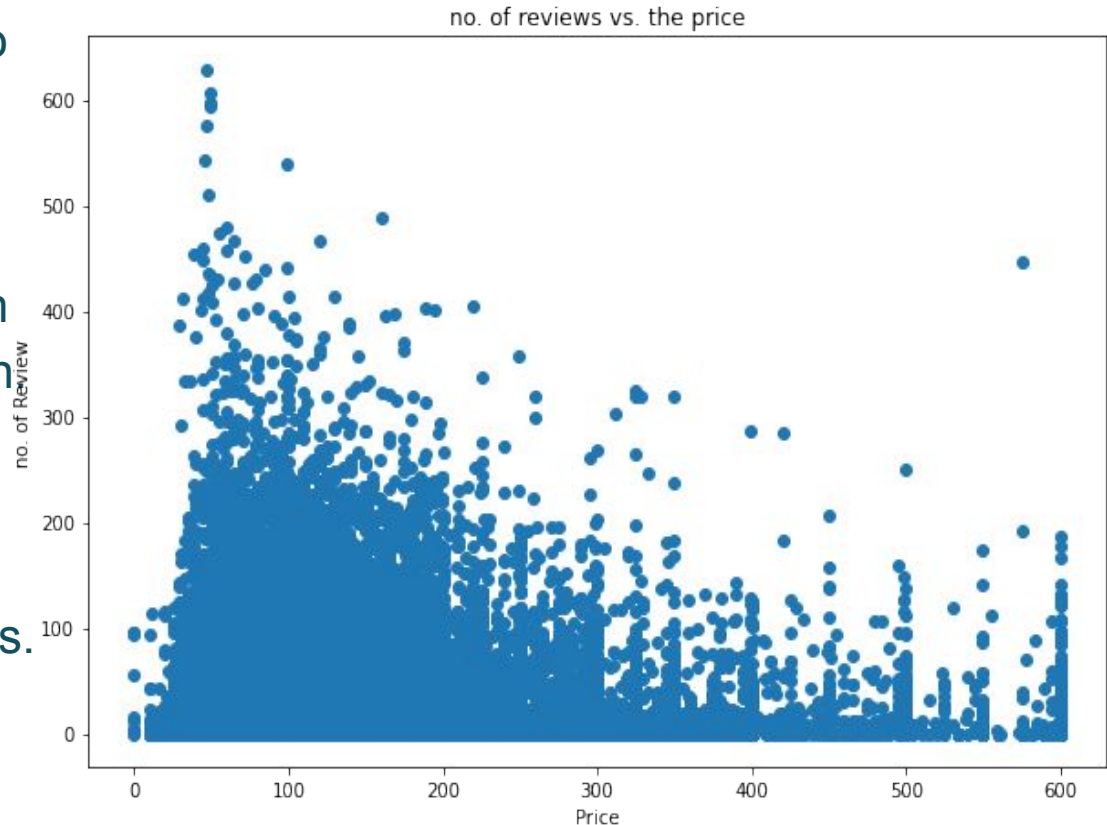
Reviews cont.



- * People who stayed at Staten Island and Bronx gave the least reviews for the rooms.
- * And these reviews range from 300-400.
- * Brooklyn, Manhattan, and Queens reviews range from 400-600.

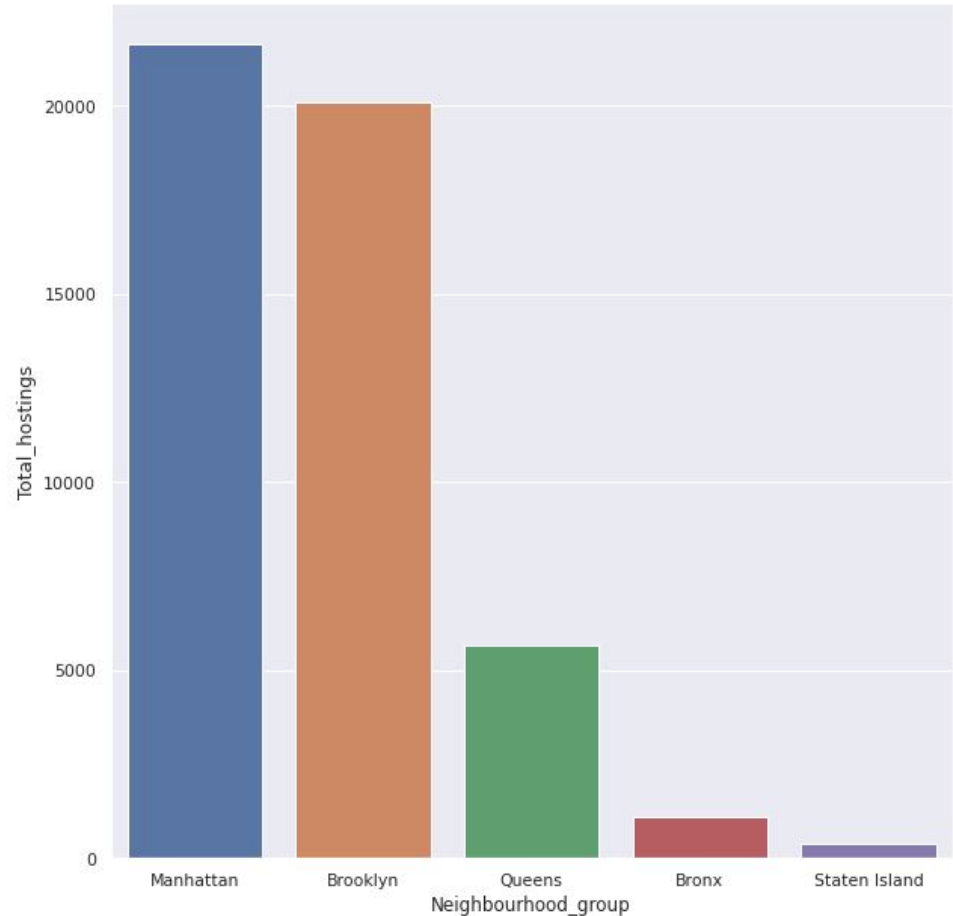
Reviews cont.

- * We can see that people who reviewed preferred rooms with low prices.
- * And most of the reviews are from Queens and Manhattan
- * Most people who payed high prices did not give review and people who payed low prices gave managed to give reviews about the rooms.

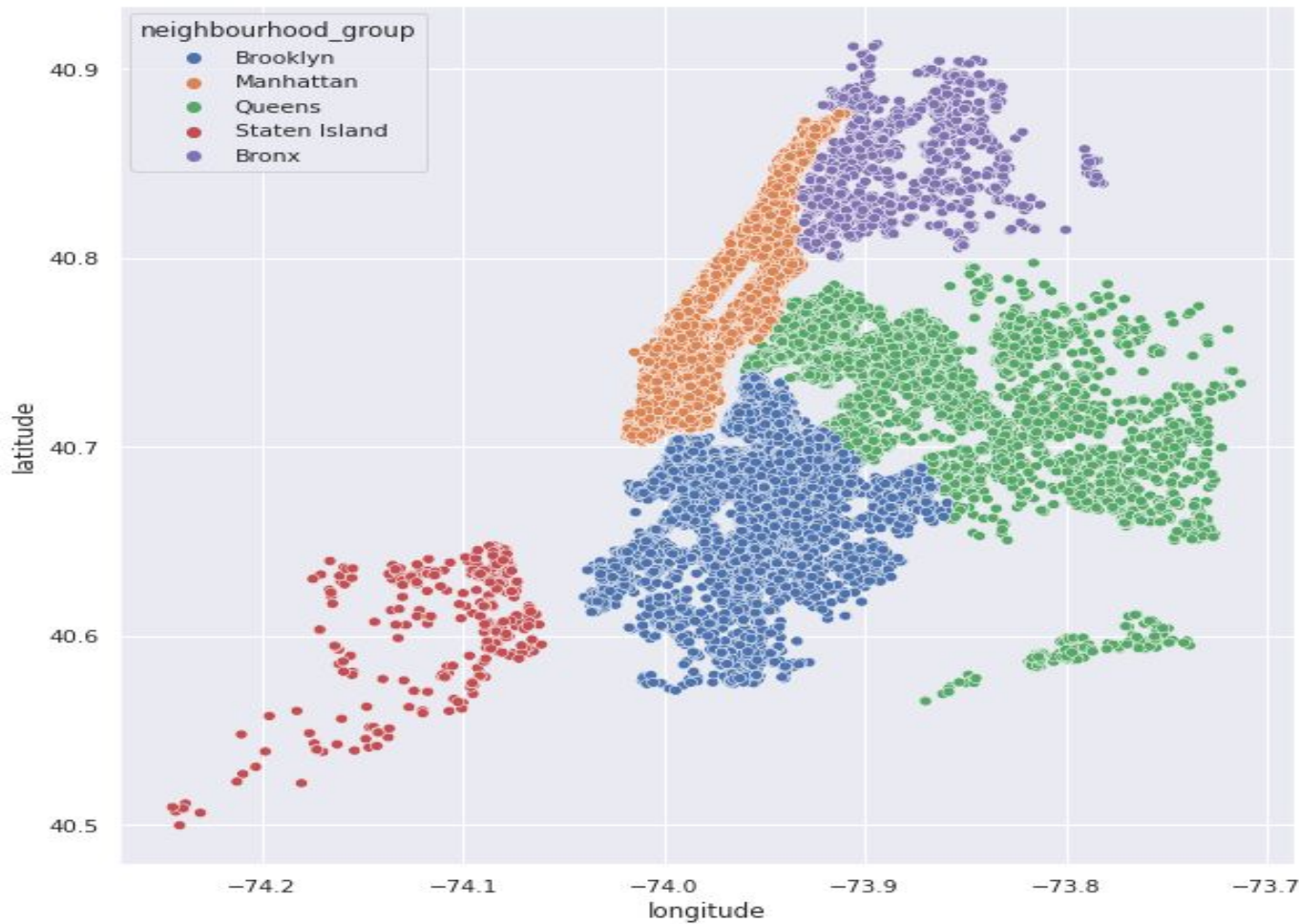


Total hostings in each neighbourhood

	Neighbourhood_group	Total_hostings
0	Manhattan	21661
1	Brooklyn	20104
2	Queens	5666
3	Bronx	1091
4	Staten Island	373



Map view



Conclusion

What can we learn about different hosts and areas?

- * Most people prefer home/apartment type rooms all over New York
- * Most people from Brooklyn prefer private rooms
- * Most people from Manhattan prefer home/apartment rooms
- * Most people from Queens prefer private rooms
- * Most people from Staten Islands prefer both private and home/apartment rooms
- * Most people from Bronx prefer private rooms

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

- * Majority of prices are in between 100-200
- * People who gave reviews prefer rooms with low prices and majority of the people who gave review are from queens people who gave maximum prices to rooms are from manhattan
- * Manhattan is very popular
- * Bronx is least popular
- * For any future investment Manhattan is the best place

Is there any noticeable difference of traffic among different areas and what could be the reason for it?

- * Yes, there is noticeable difference.
- * Each neighbourhood has its own number of listings and it differs from each neighbourhood
- * Manhattan has the most number of listings as it draws more people and hence it is popular
- * Staten Island has the least number of listings as it is less popular in New York