

# Analysis Of Airbnb Rental Data Presentation - I

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BY:

KALPESH KAKULITE

JABEZ PAUL CLARKE

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# Objective

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This presentation is aimed at the Data Analysis Managers & the Lead Data Analyst

The purpose is to provide insights into Airbnb listings across New York City.

We want to provide information and suggestions based on various attributes in the dataset to increase the revenue for Airbnb.

# Background Information

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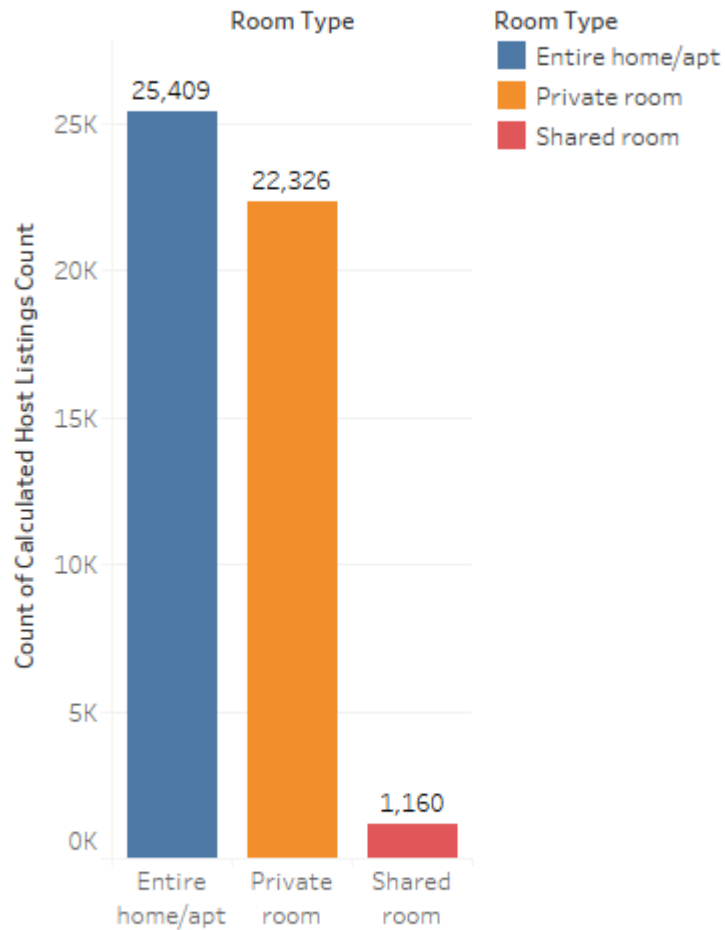
For the past few months, Airbnb has seen a major decline in revenue.

Now that the restrictions have started lifting and people have started to travel more, Airbnb wants to make sure that it is fully prepared for this change.

We have been provided with a dataset that contains information about different Airbnb listings along with their hosts, locations, prices and other attributes.

This presentation is focused on the points that will be relevant to the Data Analysis Managers & the Lead Data Analyst of Airbnb.

## Number of Host List per Housing type



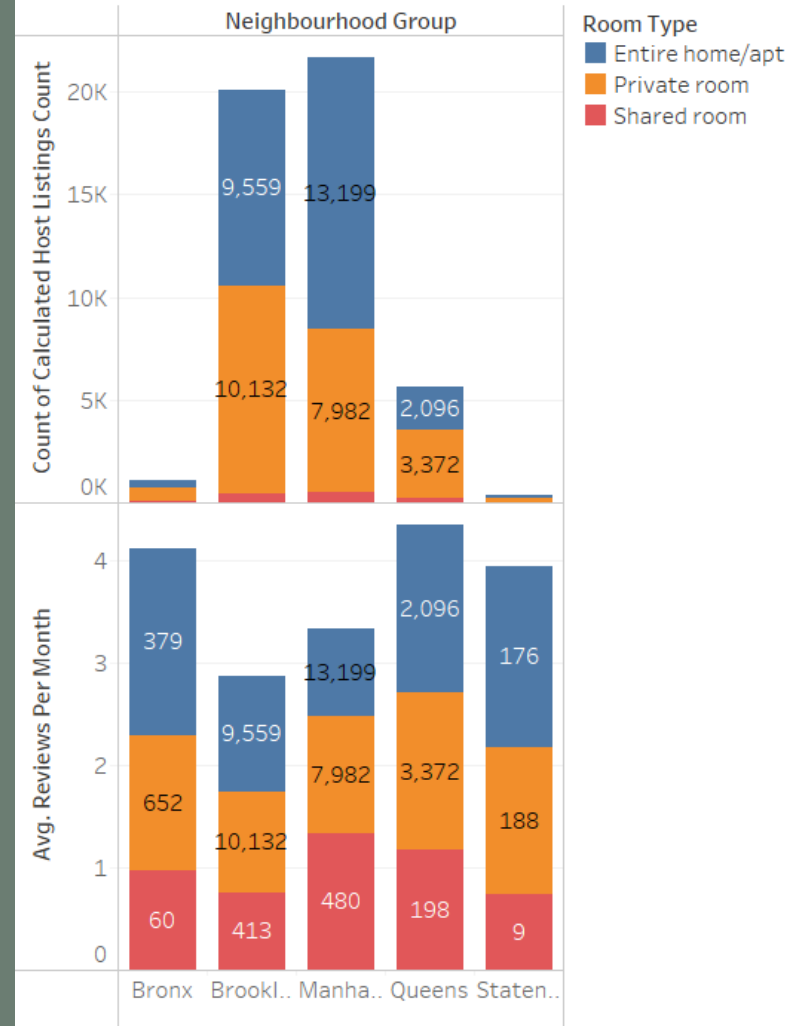
Count of Calculated Host Listings Count for each Room Type. Color shows details about Room Type. The marks are labeled by count of Calculated Host Listings Count.

The greatest number of listings is in the 'Entire home/apt' segment.

Private rooms are slightly less and are the second highest

Shared rooms are miniscule in comparison to the other two categories and are very small in number

# Number of listings by neighborhood group & Average review per month by neighborhood group



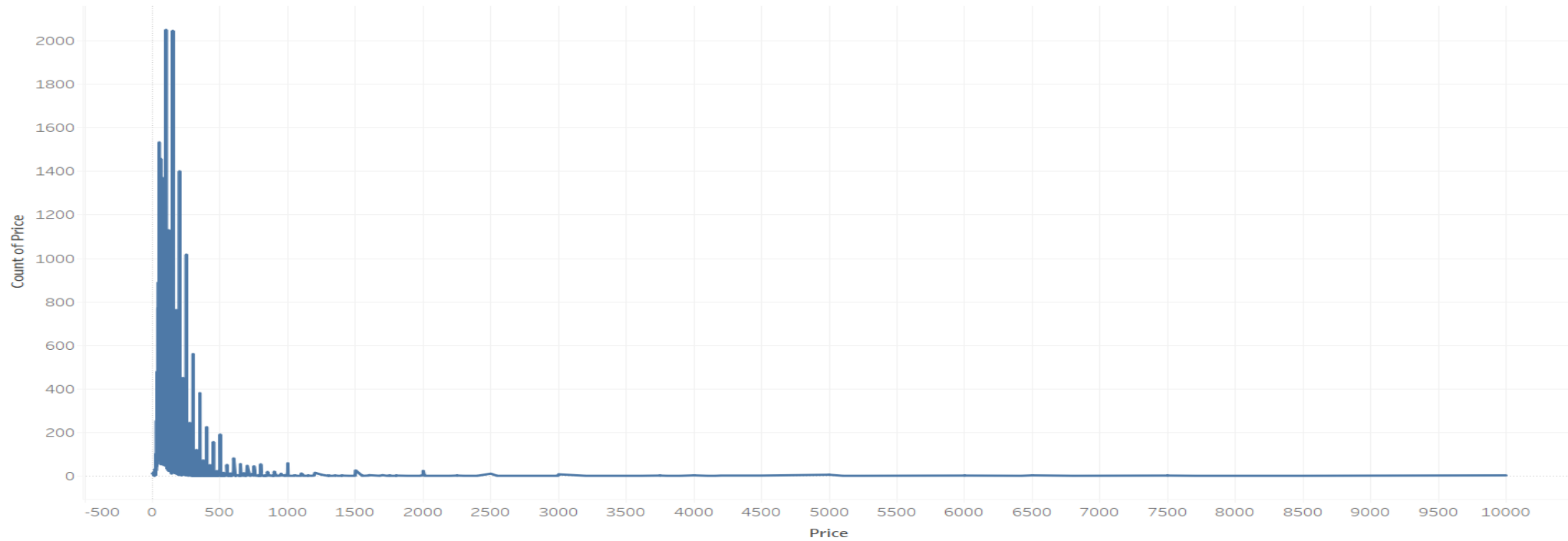
Count of Calculated Host Listings Count and average of Reviews Per Month for each Neighbourhood Group. Color shows details about Room Type. The marks are labeled by count of Reviews Per Month.

The number of listings is highest in Brooklyn and Manhattan.

Listings are very low in the Bronx and Staten Island

Average user reviews are correspondingly low in the Bronx and Staten Island and high in Brooklyn and Manhattan

### Average price distribution

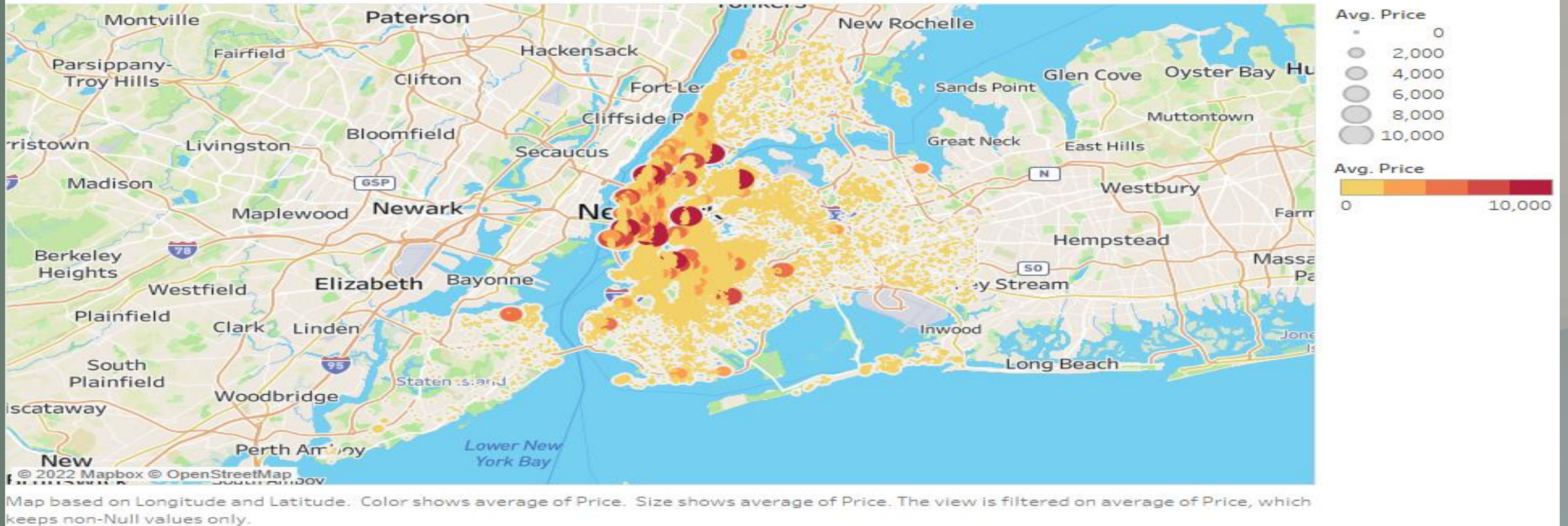


The trend of count of Price for Price.

The majority of the listings on Airbnb are under \$1,000. As the prices increase beyond \$2,000 the number of listings dramatically decrease



## Avg Price High at Shore



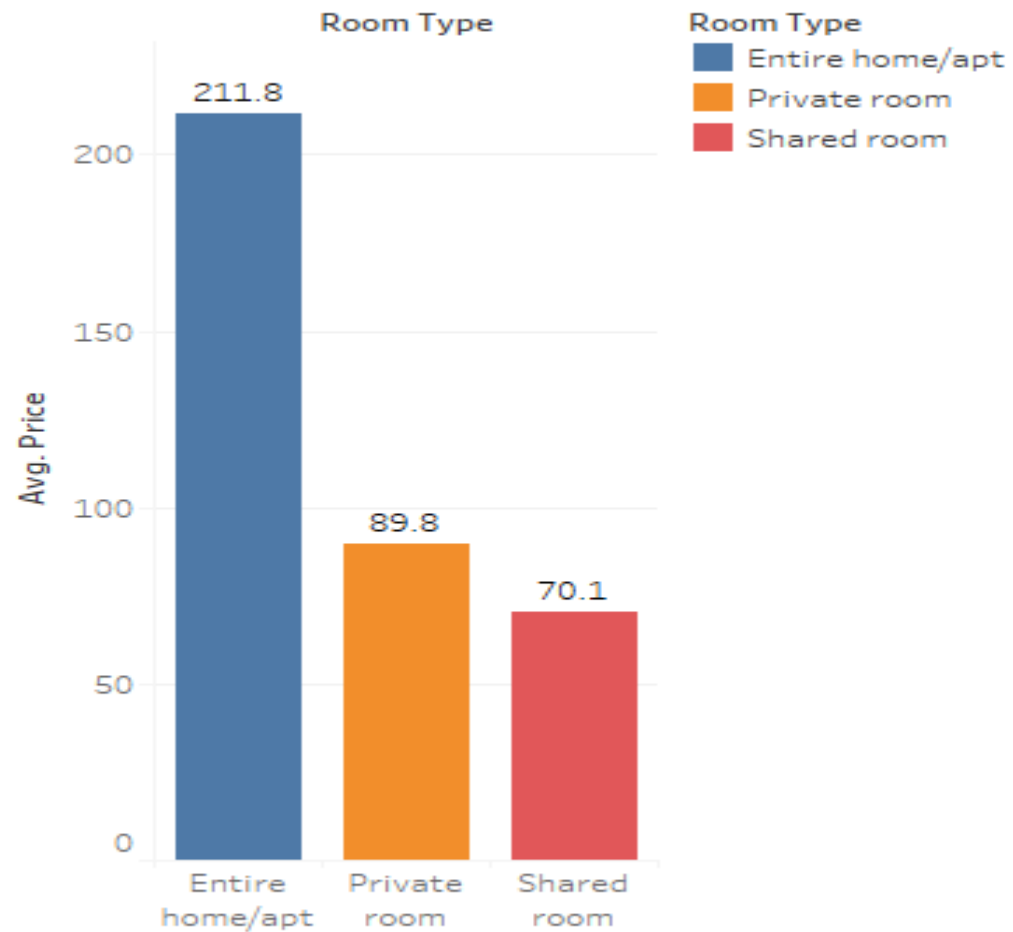
From the map we can infer that the highest prices are around the Brooklyn and Manhattan area

The density of listings is quite high in these neighborhood areas as well

The prices reduce the further we get from these neighborhood groups



## Room Type Price Analysis

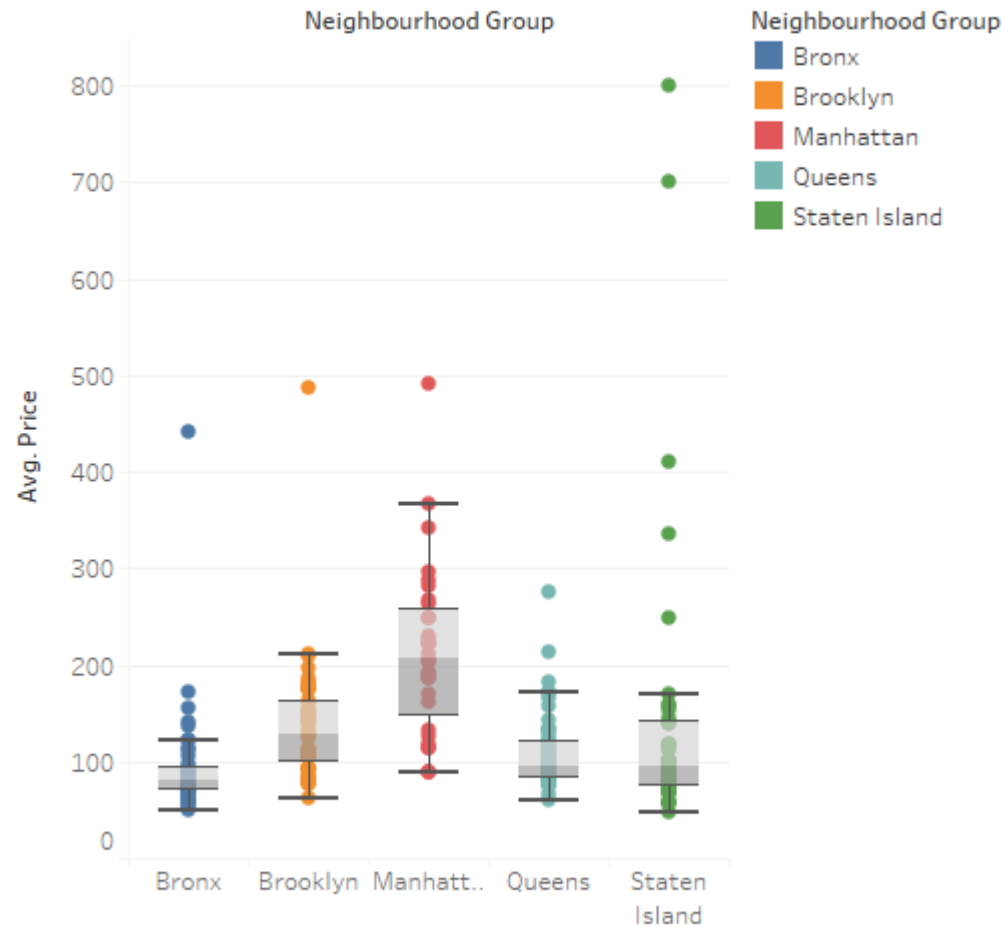


Average of Price for each Room Type.  
Color shows details about Room Type.  
The marks are labeled by average of Price.

'Entire home/apt' segments have the highest average price

Private rooms and shared rooms are much cheaper in comparison and are more affordable

## Avg Price-Neighbourhood Distribution

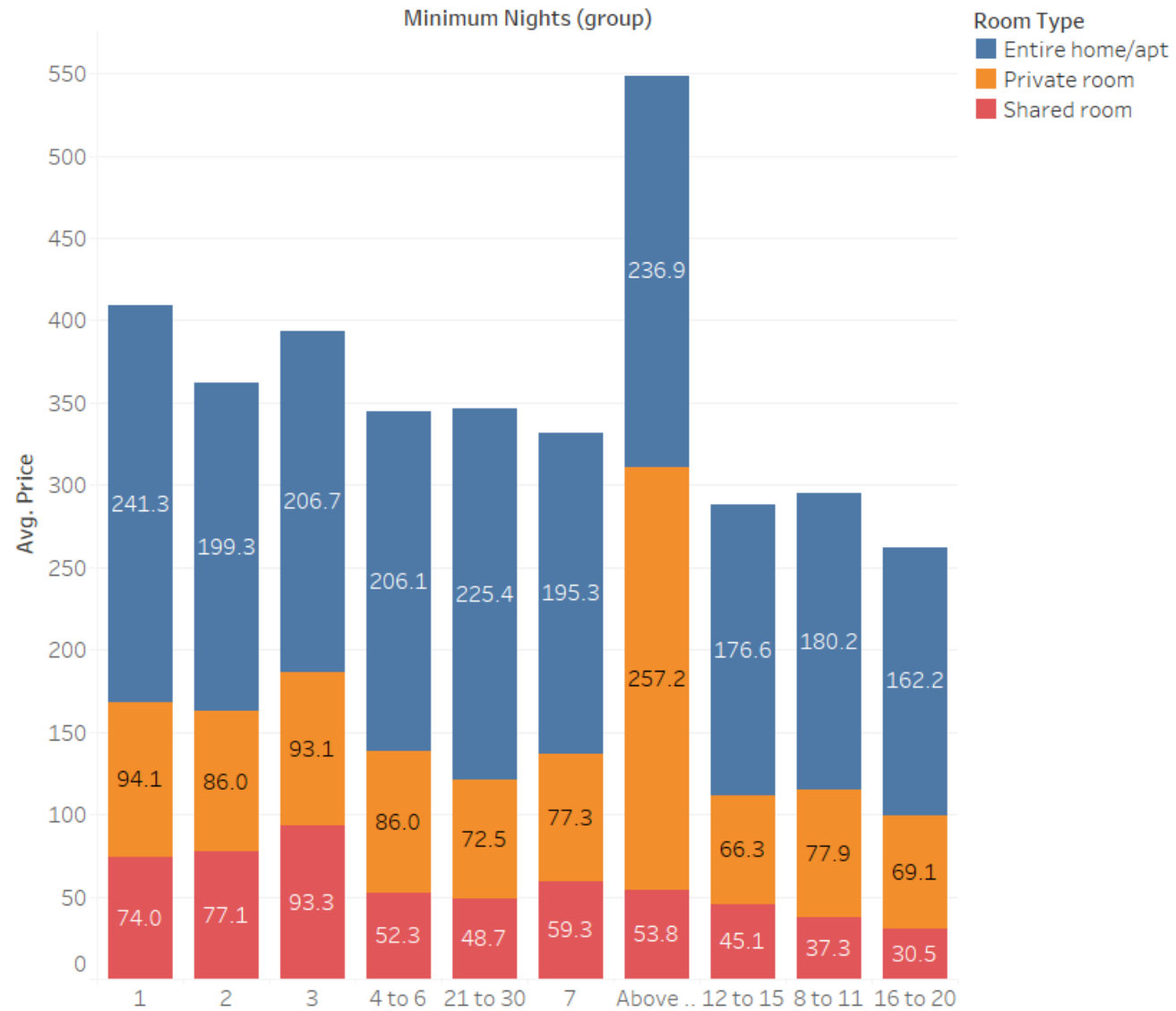


Average of Price for each Neighbourhood Group. Color shows details about Neighbourhood Group. Details are shown for Neighbourhood.

The average price is highest for Manhattan.

The lowest prices are in Staten Island and the Bronx

## Price Analysis As per Night



Average of Price for each Minimum Nights (group). Color shows details about Room Type. The marks are labeled by average of Price.

The average price is highest for the group above 30 nights in the private room category

For 'Entire home/apt' category the highest average price is for 1 night

The lowest prices are for the 16 to 20 days range

# Recommendations

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The company can identify more listings in the 'shared rooms' segment. The data analytics team can focus on this segment and produce additional research to support this initiative.

Airbnb can target the Bronx and Staten Island for additional business as the current number from these neighborhood groups are quite low in comparison to Manhattan and Brooklyn. The data analytics team can suggest ways to increase the user engagement for these areas and get more reviews for listings in these areas.

The company can create various price segments such as 'mid-range' (\$3,000 to \$5,000) and 'luxury/boutique' (\$7,000 to \$10,000) to increase the numbers in these price ranges.

# Recommendations (continued)

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The data analytics team can identify areas apart from Brooklyn and Manhattan where the density of listings is less. Then it can perform more analysis to understand the demand/supply and provide additional listings if needed.

The company can look for cheaper 'entire home/apt' listings since the demand and the price is highest for this segment

The company can research into giving offers for the 'Above 30' nights category as currently the average price is the highest for this segment.

# Appendix – Data Assumptions

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We assumed that the company is going to strategize for the post covid period which will have greater amounts of travel and bookings. This will require more acquisitions and spends by the company

We assumed that the company is not looking to expand into other geographies and is confining itself to the NYC region



# Appendix – Data Methodology

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We have analyzed the Airbnb data in the following manner :

- Remove missing values and outliers in Python

- Performed exploratory data analysis in Tableau to understand the information given in the data and derive insights

# Thank You

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