Storytelling Airbnb Case Study

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OBJECTIVE

Airbnb is an online platform using which people can rent their unused accommodations.
During the covid time, Airbnb incurred a huge loss in revenue.
People have now started travelling again and Airbnb is aiming to bring up the business again and e ready to provide services to customers.

Background

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.
So, analysis has been done on a dataset consisting of various Airbnb listings in New York.
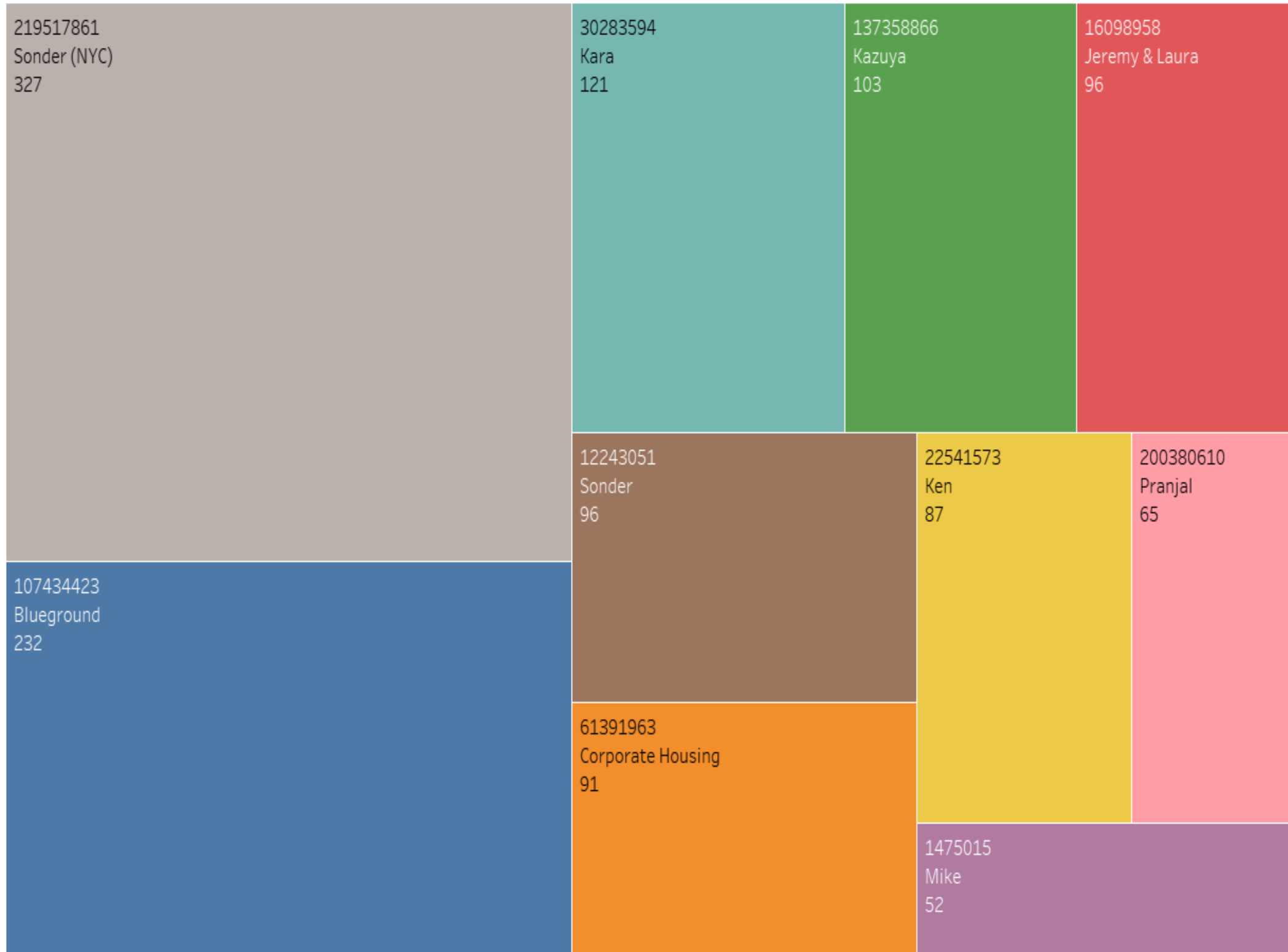
Data Preparation

Cleaned data to remove any missing values and duplicates.
Dropped insignificant columns.
Identified outliers

Top 10 Host

- Host Sonder (id 219517861), has been booked most number of times i.e. 327.

- Host Blue ground is the second popular host.

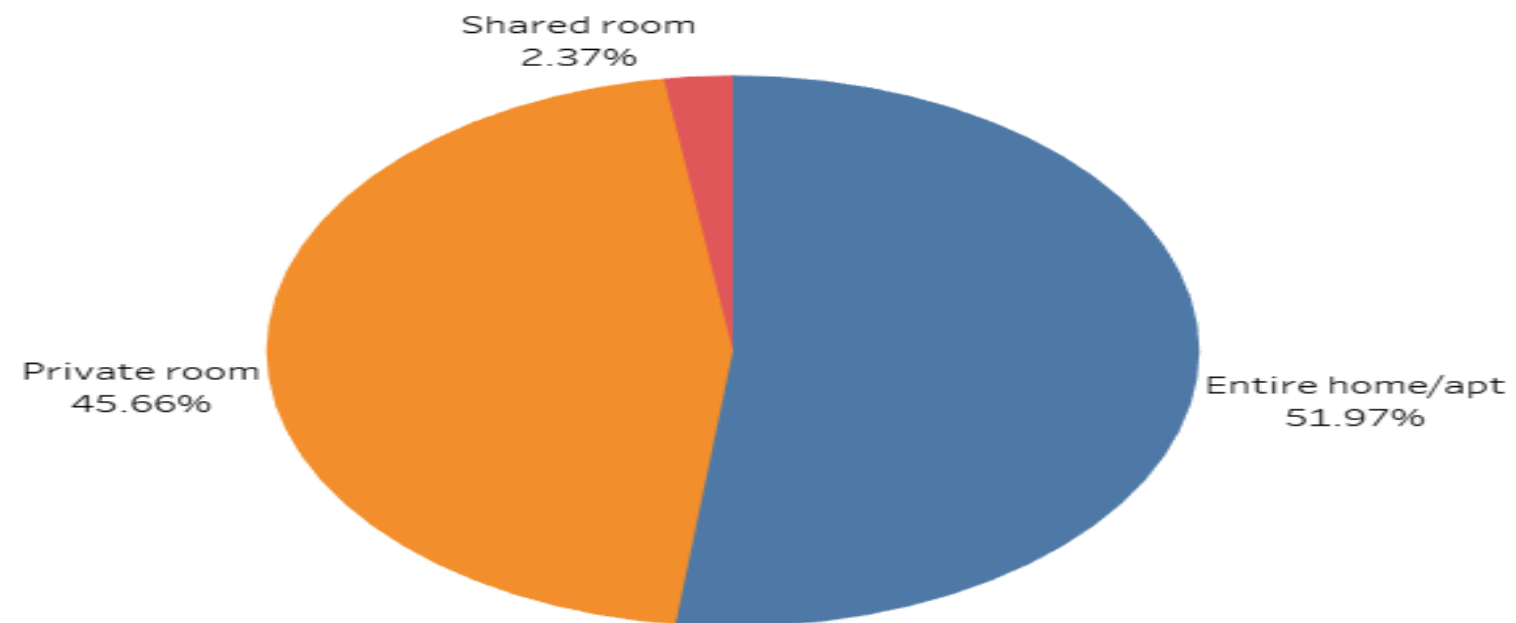- Then there are other hosts like Kara, Ken, Pranjal, Jeremy and Mike that fall under top 10 hosts.

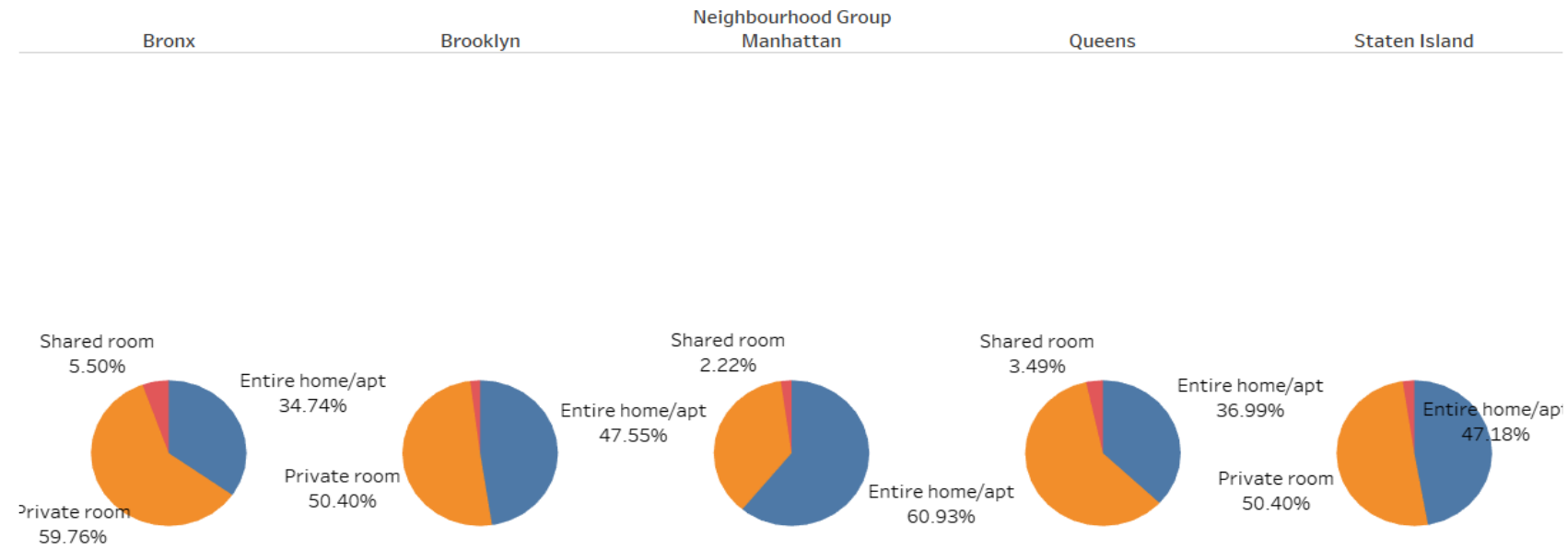# Top 10 hosts

219517861
Sonder (NYC)
327

107434423
Blueground
232

30283594
Kara
121

137358866
Kazuya
103

16098958
Jeremy & Laura
96

12243051
Sonder
96

61391963
Corporate Housing
91

22541573
Ken
87

200380610
Pranjal
65

1475015
Mike
52

Room Type w.r.t Neighbourhood Group

* There are three types of rooms - Entire home/Apartment, Private room & shared room.

* Overall, customers appear to prefer private rooms (45%) or entire homes (52%) in comparison to shared rooms (2.4%).

* Airbnb can concentrate on promoting shared rooms with discounts to increase bookings and also acquire more private listings.

* Queens & Bronx contribute 60% each to private rooms, more than the combined ratio of 45% Whereas, Manhattan has a higher contribution in entire home (61%), compared to the combined ratio of 52%.

Room Type wrt Neighbourhood group

Neighbourhood Group

| Bronx | Brooklyn | Manhattan | Queens | Staten Island |

Bronx:
- Shared room 5.50%
- Entire home/apt 34.74%
- Private room 59.76%

Brooklyn:
- Entire home/apt 47.55%
- Private room 50.40%

Manhattan:
- Shared room 2.22%
- Entire home/apt 60.93%

Queens:
- Shared room 3.49%
- Entire home/apt 36.99%
- Private room 50.40%

Staten Island:
- Entire home/apt 47.18%

- Shared room 2.37%
- Private room 45.66%
- Entire home/apt 51.97%

Price Analysis Neighbourhood Wise

* Most of the outliers in Price column are for Brooklyn and Manhattan.

* Also, Manhattan has the highest range of prices for the listings.

* Bronx is the cheapest of them all.

* We can see the median price of all neighbourhood groups lying between $ 80 to $ 300.

* Price was highly positively skewed so median was very close the lower quartile with some outliers as seen in the boxplot below.

Price Analysis Neighbourhood wise
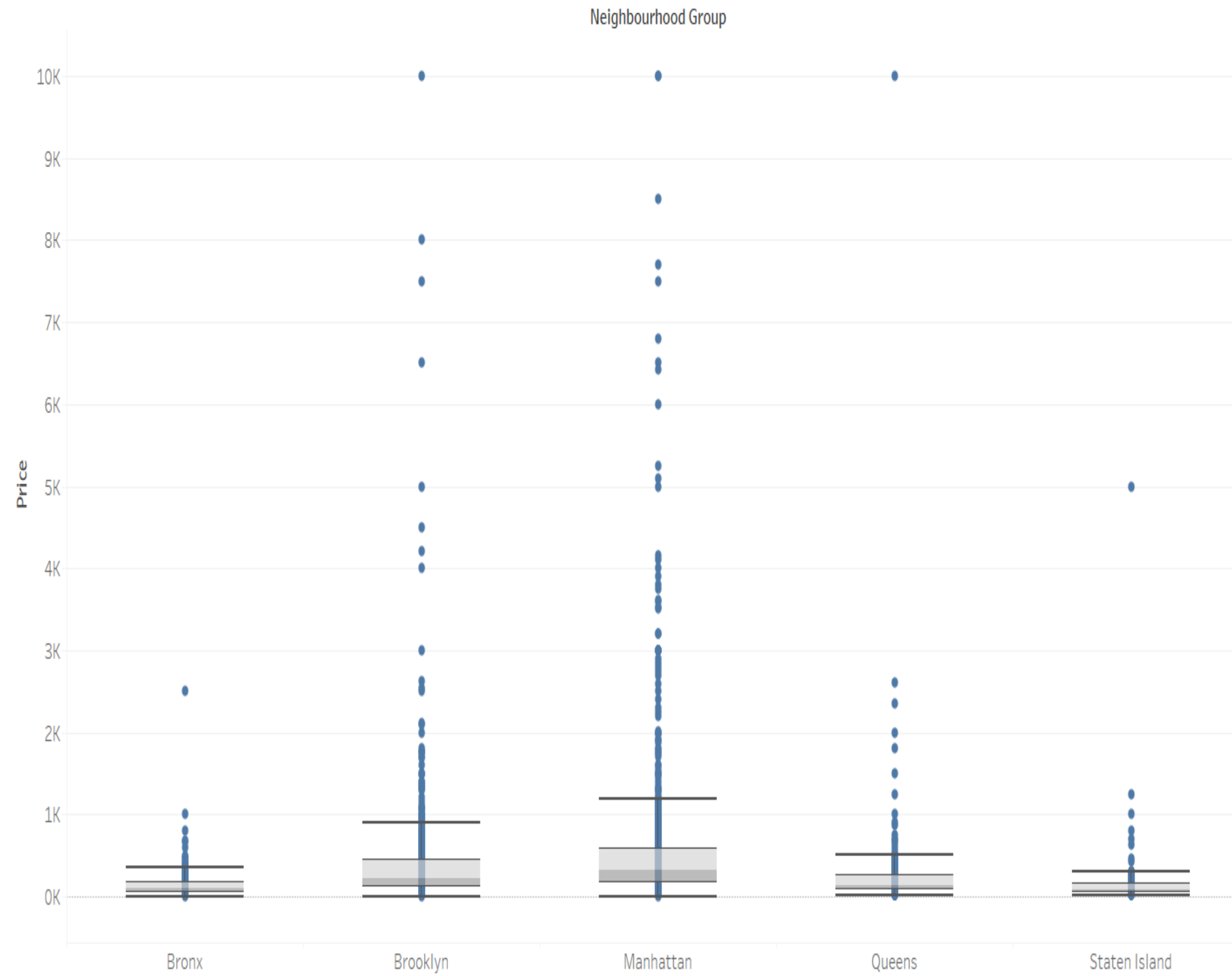
Average Price of Neighbourhood Groups

- The average price of listed properties in Manhattan is around 196.9, which is highest among all neighbourhoods.

- Average price for Brooklyn is second highest i.e. 124.4.

- Bronx appears to be an affordable neighbourhood as the average price is almost half than Manhattan's average price.

Avg Price Of Neighbourhood group
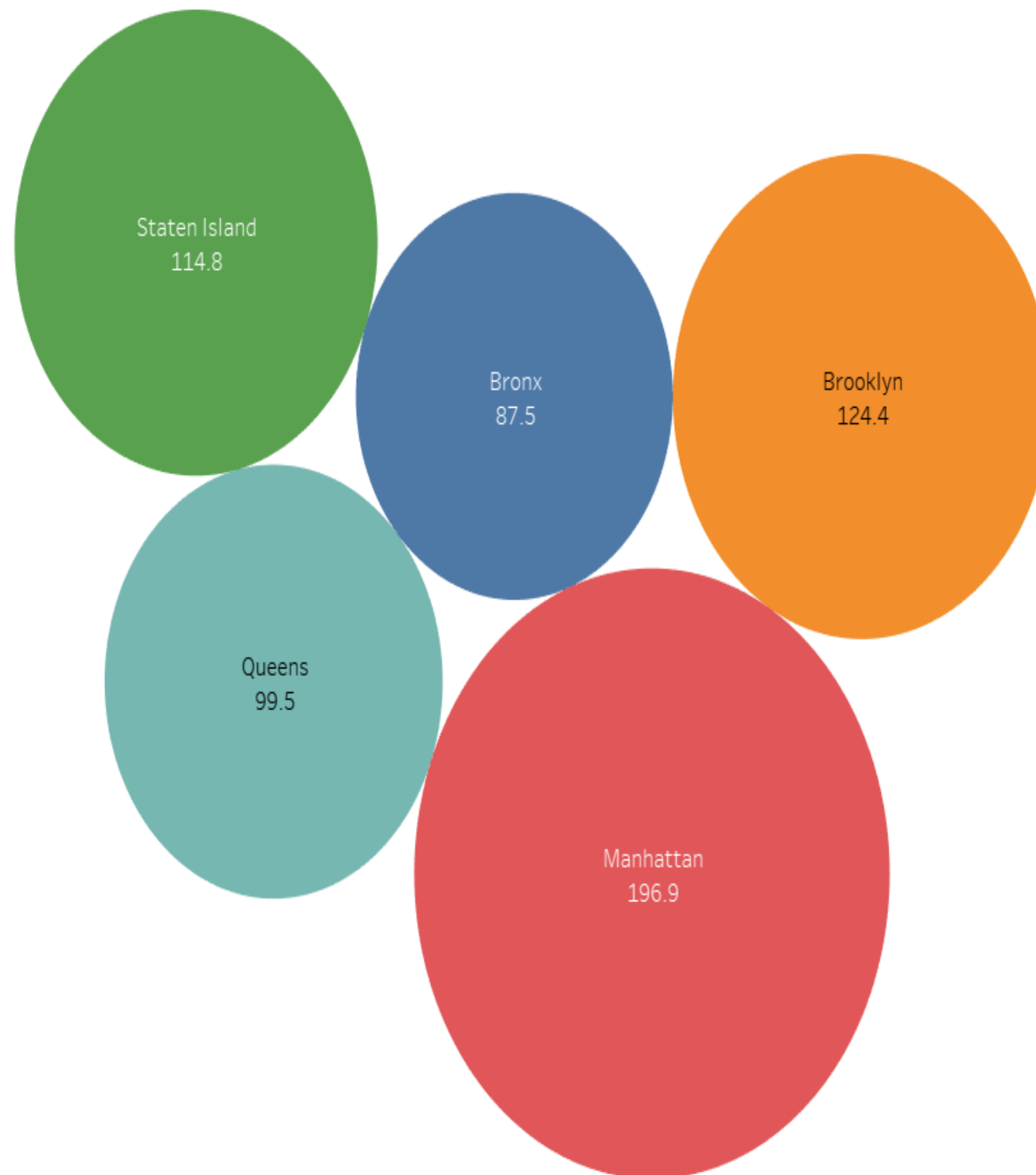
Customer Booking w.r.t Minimum Nights

- The listings with Minimum nights 1-5 have the most number of bookings. We can see a prominent spike in 30 days, this would be because customers would rent out on a monthly basis.

- After 30 days, we can also see small spikes, this can also be explained by the monthly rent taking trend.

- Manhattan &Queens have higher number of 30 day bookings compared to the others. The reason could be either tourists booking long stays or mid-level employees who opt for budget bookings due company visits

Customer booking w r t min nights