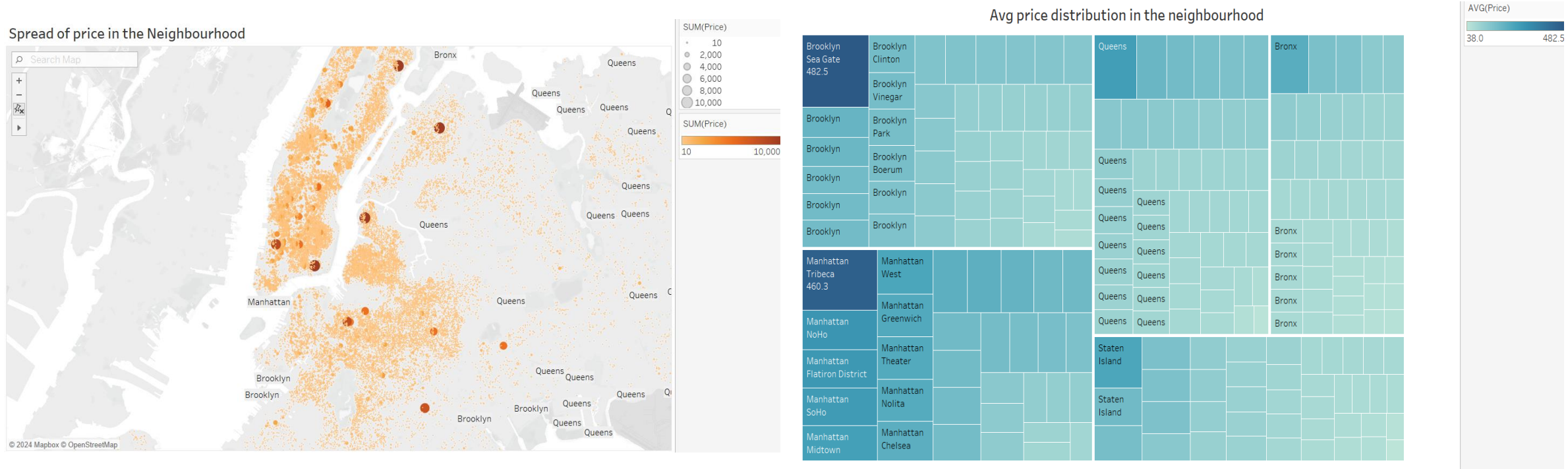# Story telling case study : Airbnb, NYC

To
The data analysis managers and
The lead data analyst

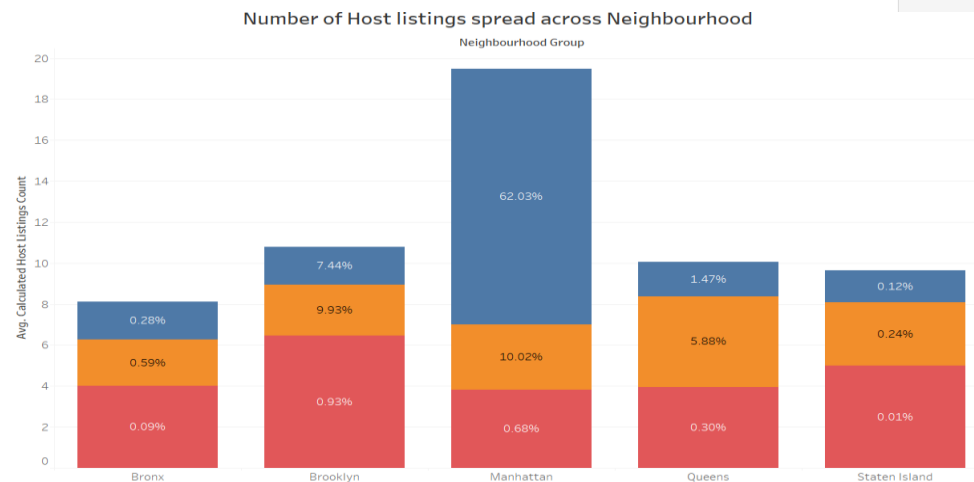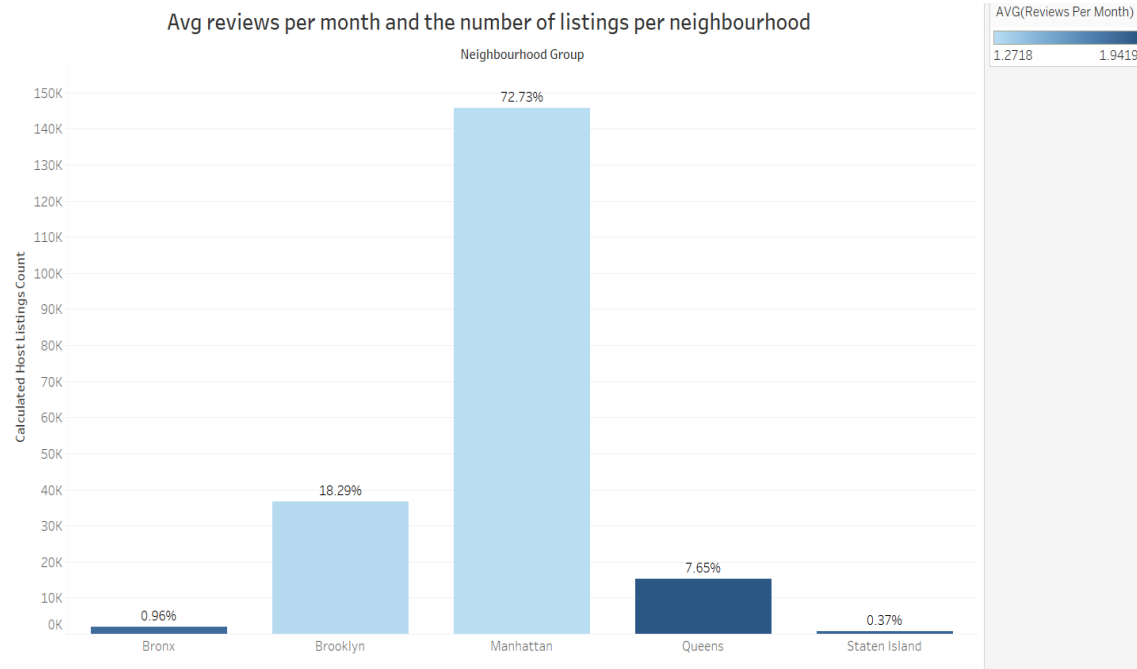# AGENDA

- Objective
- Background
- Key Findings
- Recommendations
- Appendix:

  Data Sources

  Data methodology

  Data assumptions

Insights about price spread in the Neighbourhood

Spread of price in the Neighbourhood

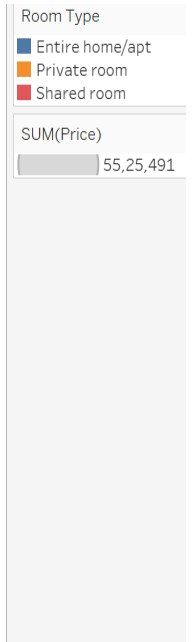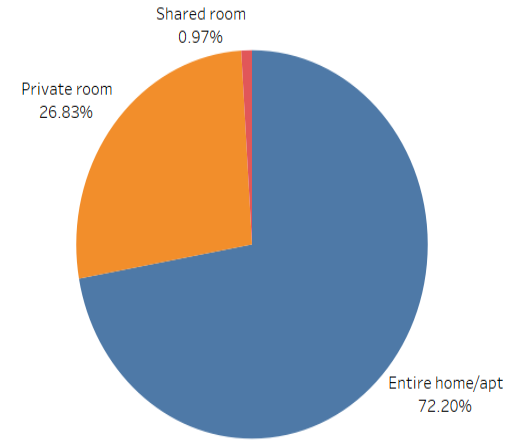Avg price distribution in the neighbourhood

- Most of the listings are spread across Manhattan and Brooklyn

- Manhattan seems to have the most of the high priced listings followed by Brooklyn and Queens

- Though Manhattan seems to be highly priced neighbourhood, We can see Sea gate Brookyln also is offering high priced listings

Distribution of room types and host listings

Avg reviews per month and the number of listings per neighbourhood

Number of Host listings spread across Neighbourhood

Types of rooms preferred by customers

Room Type
- Entire home/apt
- Private room
- Shared room

SUM(Price)
55,25,491

AVG(Reviews Per Month)
1.2718   1.9419
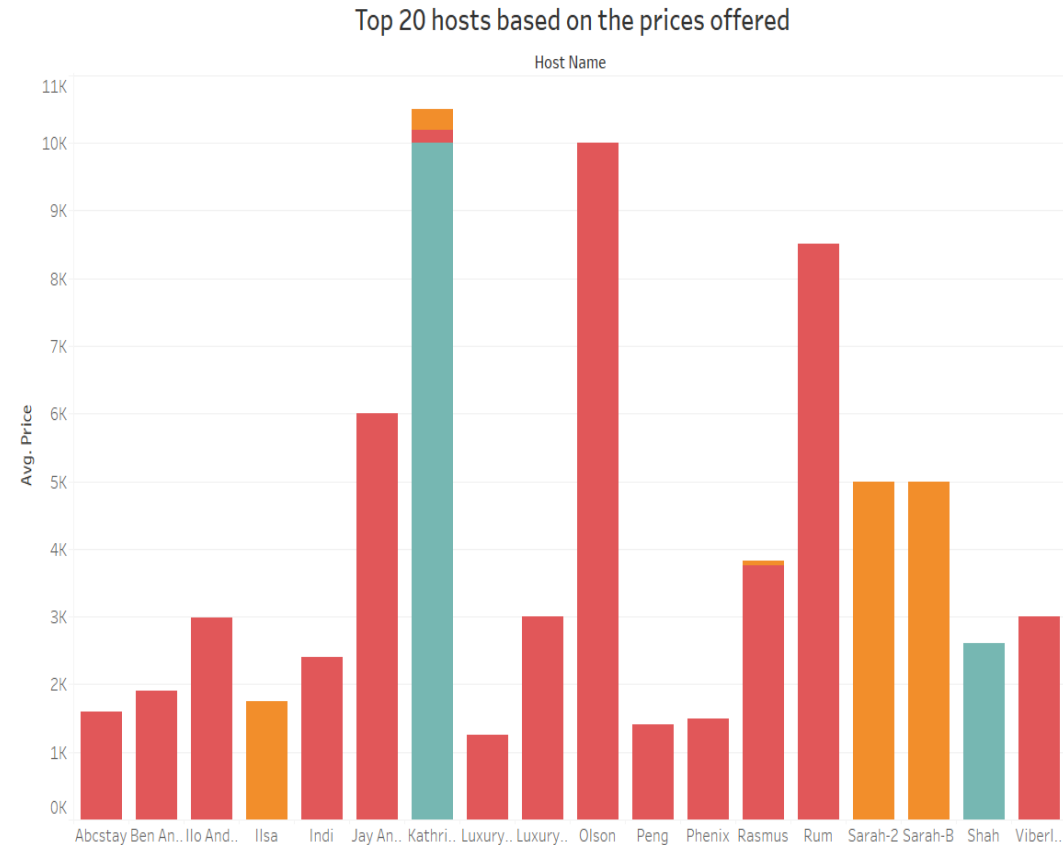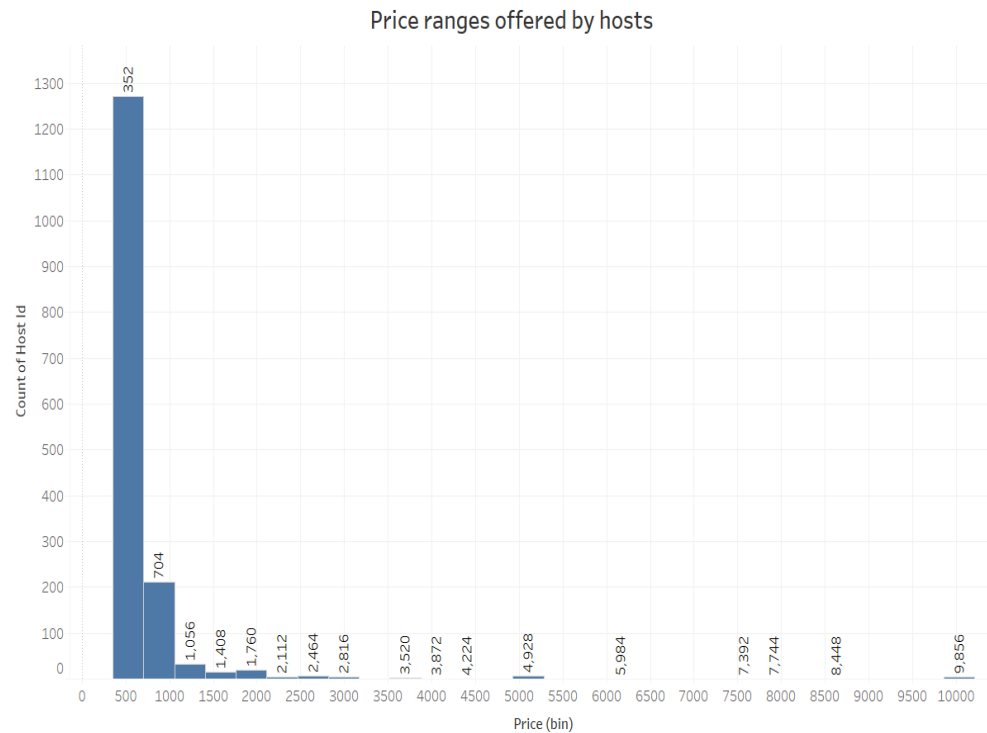

- 72% of the price is offered by Entire home/apt

- Manhattan has almost 62% of its listings as Entire home/apt

- Manhattan with 73% of the total number of listings has got the least avg reviews per month and Queens has got the highest reviews

Price ranges offered by hosts and Top 20 hosts based on prices

Price ranges offered by hosts

Top 20 hosts based on the prices offered
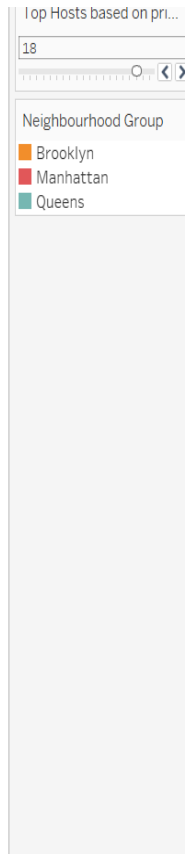
- The customers are preferring the price bin $352 the most and $4928 the least

- There are few outlier listings at price range $9856

- Though Manhattan is offering the high priced listings, The hosts Kathrine and Shah from Queens, Sarah-2, Sarah-B and Ilsa from Brooklyn also made it to the top 20 hosts list for maximum price offered

Top hosts based on avg reviews per month
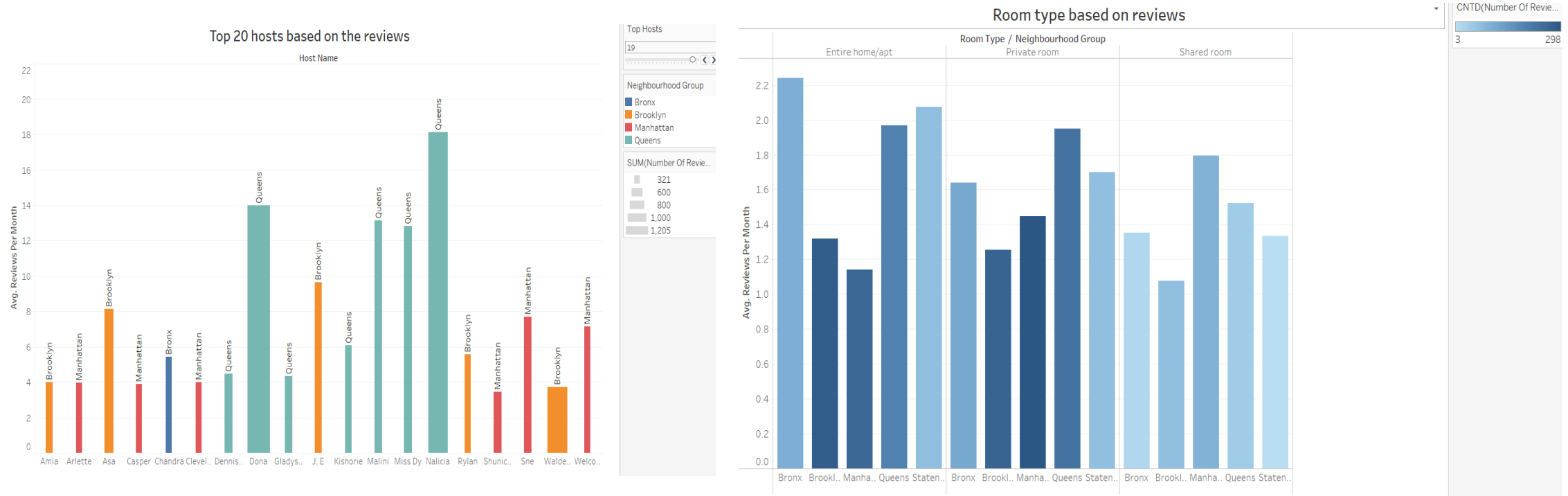
- The hosts Dora, Nalicia from Queens top the avg reviews per month and also the number of reviews are also high for these hosts.

- The hosts from queen have good avg reviews per month as we can see 7 out of top 20 hosts are from Queens followed by Manhattan and Brooklyn

- Entire home/apt has the top avg review per month overall. No. of reviews are less for the shared room comparitively

Recommendations

- The spread of listings in Queens should be encouraged

- Prices of the Manhattan listings can be optimised

- Reviews from customers needs to be encouraged

- Listings with shared rooms needs to be increased

Appendix – Data sources

- Data contains the below columns
- Data has been acquired from Upgrad case study

```
Categorical Variables:
    - room_type
    - neighbourhood_group
    - neighbourhood

Continous Variables(Numerical):
    - Price
    - minimum_nights
    - number_of_reviews
    - reviews_per_month
    - calculated_host_listings_count
    - availability_365
- Continous Variables could be binned in to groups too

Location Varibles:
    - latitude
    - longitude

Time Varibale:
    - last_review
```
Variable Categories

Appendix - Data Methodology

- The below columns has null values hence removed null value rows

       Host name

       Name

       Last review

       Reviews per month

- The price column also had lots of $0 values. Filtered these rows
- Price column had outliers like $10000 values. Hence filtered the values above $7000

More details on [attached](#) document

Appendix – Data Assumptions

- The price value for many listings is $0 which is not possible. Didn't consider these values for analysis

- Availability_365 also has many null values which is not possible. This columns is not used for the analysis