# Airbnb Analysis Insights

By

Atulya Pattamatta
Vyshnav E
Hemant Kokane                                                                (DS C44)

# Agenda

- Objectives
- Key Findings
- Recommendations
- Appendix

# Objectives

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 full prepared for this change.
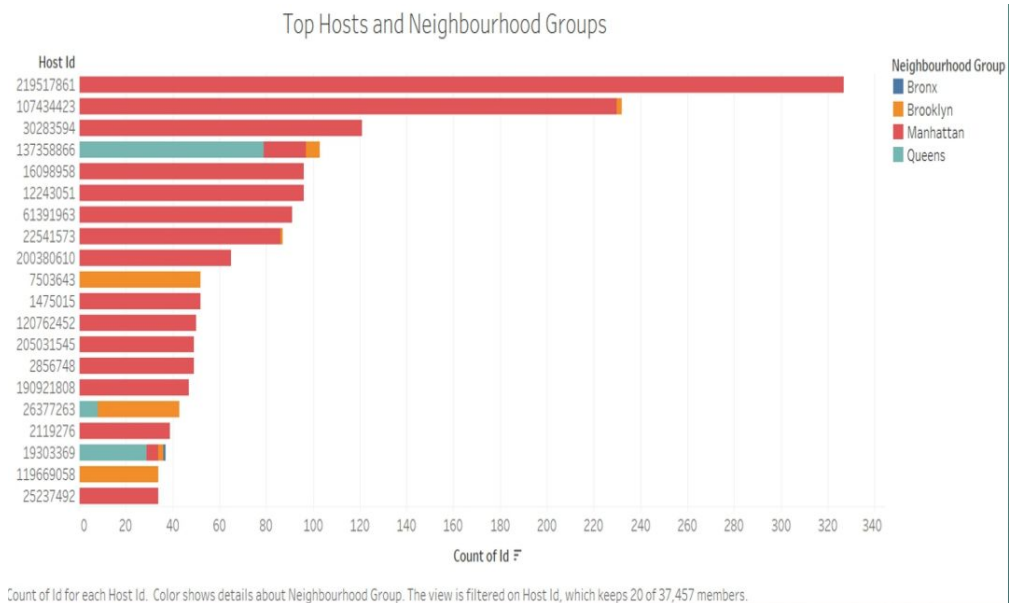
So, analysis has been done on a dataset consisting of various Airbnb listings in New York to increase the revenue.

# Key Findings

# Airbnb Hosts

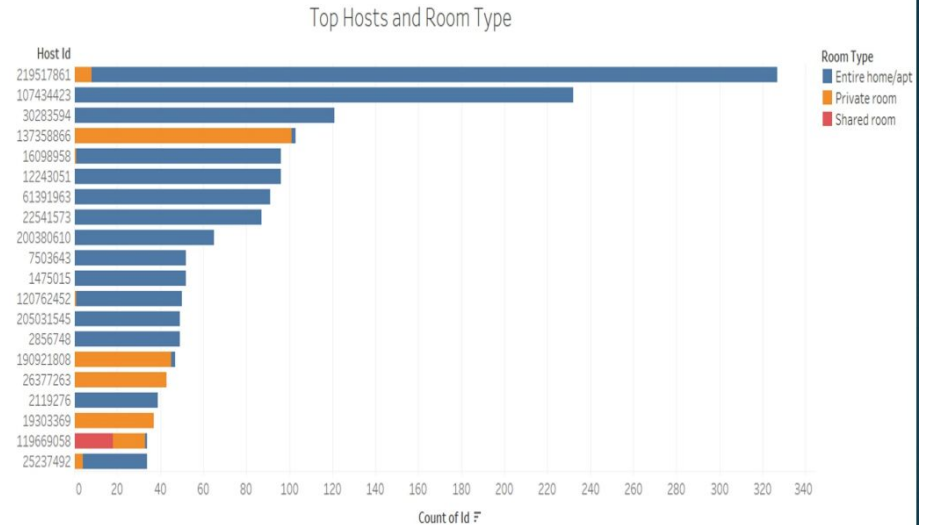- **Top Hosts and Neighbourhood Groups**

Hosts who have maximum properties in Manhattan, Brooklyn and Queens. As evident, these areas generally see a high demand, hence more hosts from these areas should be acquired



Top Hosts and Neighbourhood Groups

Count of Id for each Host Id. Color shows details about Neighbourhood Group. The view is filtered on Host Id, which keeps 20 of 37,457 members.

# Airbnb Hosts

- **Top Hosts and Room Type:**

Hosts with Entire home/apartment are the most in number followed by hosts with private rooms. These are evidently in the maximum demand, hence more hosts with entire apartments or private homes should be acquired.



Top Hosts and Room Type

Count of Id for each Host Id. Color shows details about Room Type. The view is filtered on Host Id, which keeps 20 of 37,457 members.

# Popular Neighbourhoods

Customers seem to have preferred neighbourhoods mainly in the Manhattan (44% of total listings) and Brooklyn (41% of total listings) areas.

Since, getting traction for the business is a key goal here, these highly preferred areas should be targeted.



Popular Localities
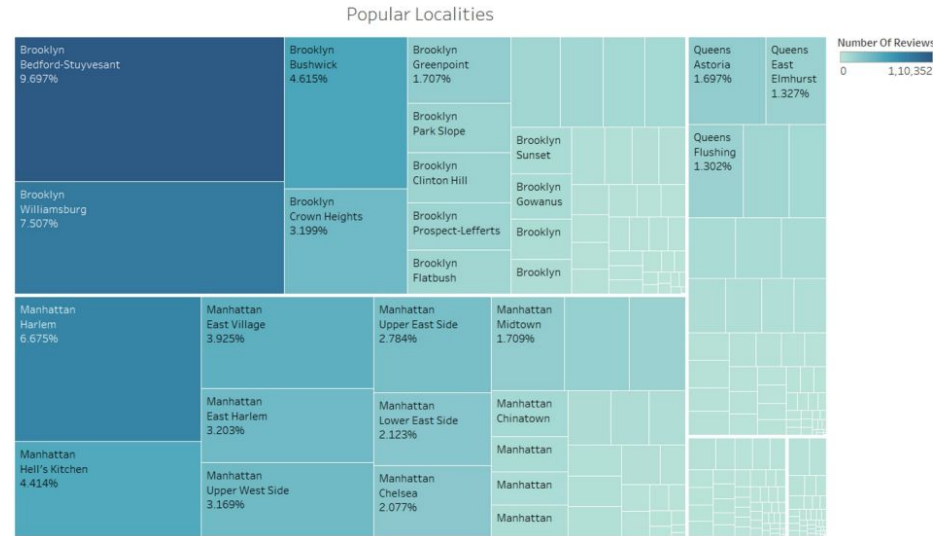
Neighbourhood Group, Neighbourhood and % of Total Number Of Reviews. Color shows sum of Number Of Reviews. Size shows sum of Number Of Reviews. The marks are labeled by Neighbourhood Group, Neighbourhood and % of Total Number Of Reviews.

# Price Preferences

As we can see from the boxplot, the mean of the prices is around $150 which is evident from the histogram which shows maximum properties in the range of $0 to $200.

However, there are premium properties as well, with price going up till $10,000, but generally not more than 5 for each premium price range.



Pricing Range Preferred
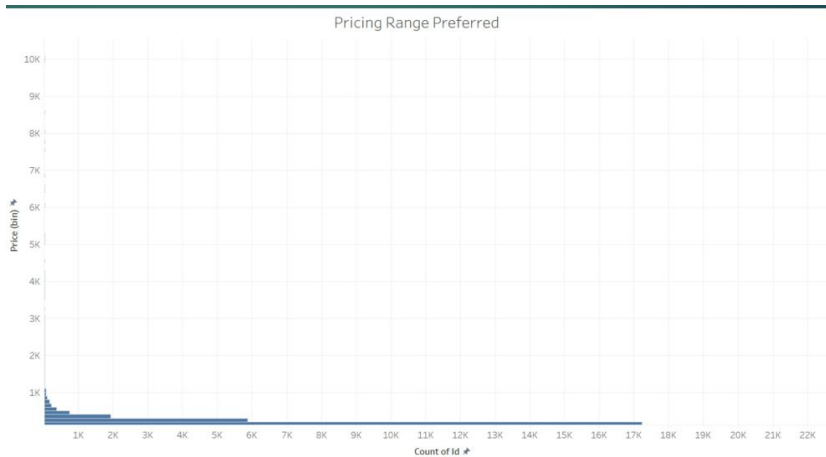
The trend of count of Id for Price (bin).



```
fig = plt.figure(figsize=(5,8))
plt.boxplot(airbnb_data['price'])
plt.show()
print("Mean of prices:" ,airbnb_data['price'].mean())
```
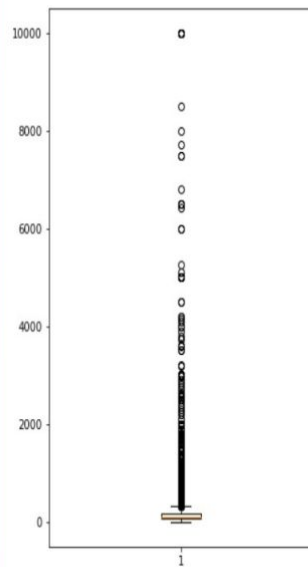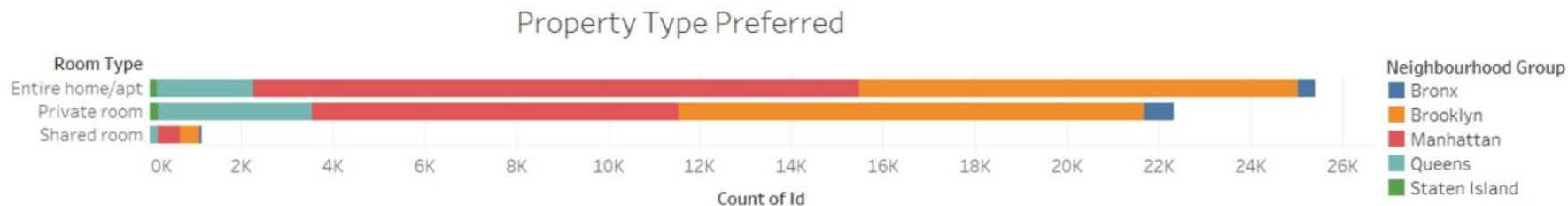
Mean of prices: 152.7206871868289

# Property Type Preferred

While entire homes/apartments are the most preferred in general, among them, properties in the Manhattan area have been the most in demand.

This is followed by private rooms where the Brooklyn area is most in demand



Property Type Preferred

Count of Id for each Room Type. Color shows details about Neighbourhood Group.

# Customer Oriented Properties

Although Manhattan and Brooklyn areas are in high demand, the average customer reviews per month are least for these.

Low average monthly reviews show that these properties aren't functioning at their full potential.

Since these are high potential areas, improvements should be made in the services for a more customer oriented experience.
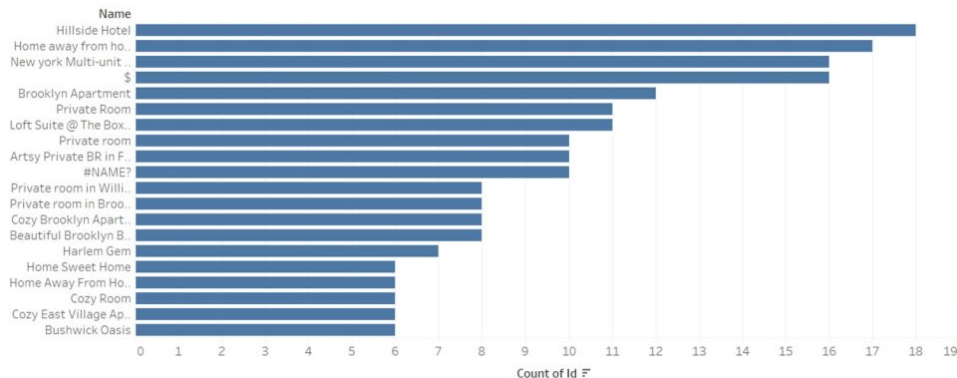
Also, entire homes/apartments are more customer oriented and provide a better experience as compared to private rooms.



Customer Oriented

Average of Reviews Per Month for each Neighbourhood Group. Color shows details about Room Type.

# Popular Properties

Most popular localities are in Brooklyn and Manhattan. Bedford-Stuyvesant (10% of total reviews), Williamsburg (8% of total reviews) belong to the Brooklyn area, followed by Harlem in Manhattan (7% of total reviews) and fourth being Bushwick (5% of total reviews) again in Brooklyn.



3.1 Most popular properties

Count of Id for each Name. The view is filtered on Name, which keeps 20 of 47,886 members.

# Recommendations

- **Manhattan and Brooklyn areas are preferred neighbourhoods area. Hence those areas should be targeted.**

- **Entire homes/apartments are the most preferred, hence they should be targeted.**

- **Entire homes/apartments are more customer oriented and provide a better experience as compared to private rooms, hence customer services for private room should be improved.**

# Appendix

- The important variable in the data dictionary are neighborhood_group, room_type, price , location & reviews.
- Methodology document has been uploaded in PDF format separately.
- We have used AirBnB data from the year 2019.

# Thank You.