

Airbnb Case Study

Presented To –
Lead Data Analyst & Data Analysis Manager

Presented By –
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Objectives

- Improve our shared understanding about our end consumer experience and preferences.
- Improve the shared understanding about the challenges and gap faced by the customers hosting their personal space on the platform.
- Provide early recommendations to the Lead Data Analyst & Data Analysis Manager to understand some important insights based on various attributes in the dataset so as to increase the revenue.

Initial Understanding & Assumptions about the Data

- There could be two reasons for the decline in the Airbnb's revenue: – Firstly, the sites hosted on the platform are not providing better user experience to the end consumers – Secondly, there could be another competitor capturing the market share
- We first try to work on the first reason as it is internal to the company and can have access to that Data for analysis
- The provided data is captured from the CRM tool used by Airbnb to manage their customers that are hosting sites on their platform.
- The reviews provided in the data frame are assumed to be positive as it is not mentioned whether they are negative or positive reviews.

Background Summary

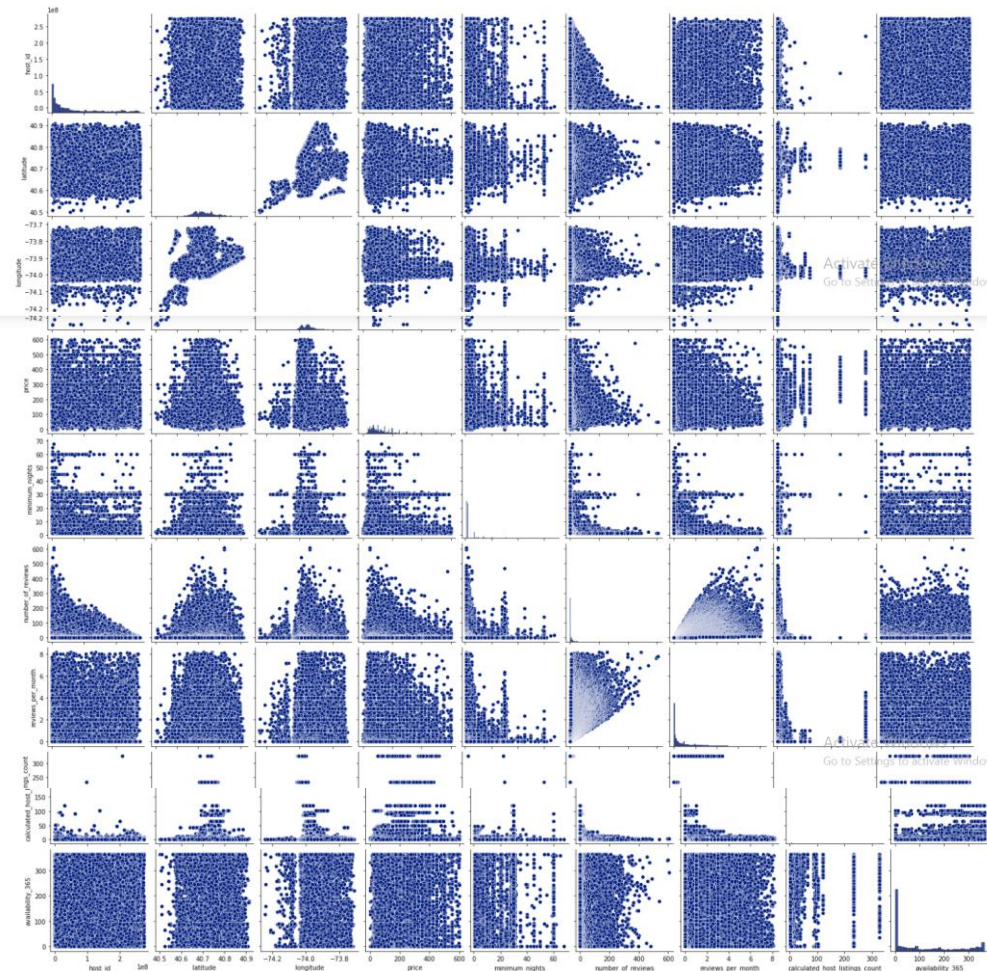
- In the last few months, Airbnb has seen a major decline in revenue due to lockdown imposed during pandemic.
- Hence provided the information in hand based on previous data captured, we need to analyze the patterns for declining profits and recommend certain suggestions to overcome.
- All the five neighbourhood's borough (New York City) – the Bronx, Brooklyn, Manhattan, Queens and Staten Island – have contributed around \$105 million in economic activity

```
In [35]: # Bi-Multivariate Analysis:

# Here we first plotted a pairplot of all the numeric columns using seaborn Library in Python itself.
# Below is the code for the same.

In [36]: sns.pairplot(data)

plt.show()
```



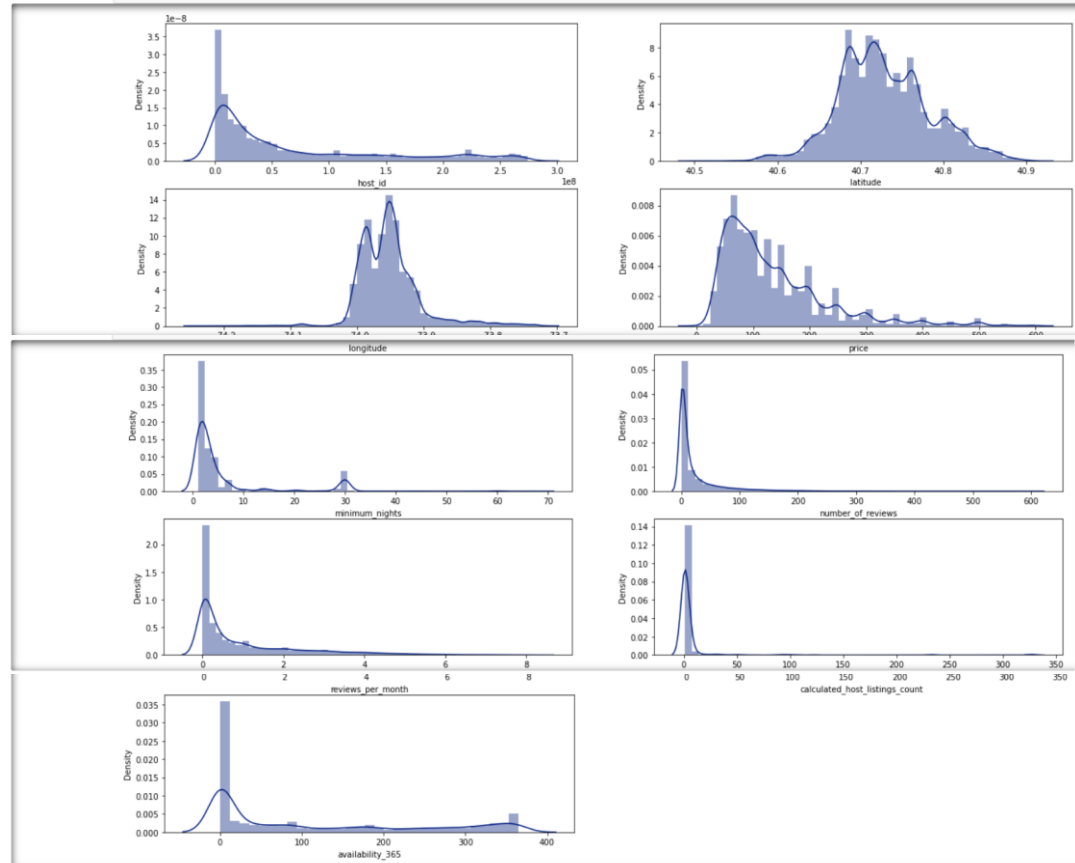
```
In [38]: # Parallel to we created all other Bivariate and Multivariate plots using Tableau.
```

```
In [39]: data.to_csv('AIRBNB_modified.csv',index=True)
```

Bi-Multivariate Analysis:

- It seems to be no correlation between the numerical variables.

```
plt.subplot(5,2,n+1)
sns.distplot(data[col])
```



In [31]: # Findings:

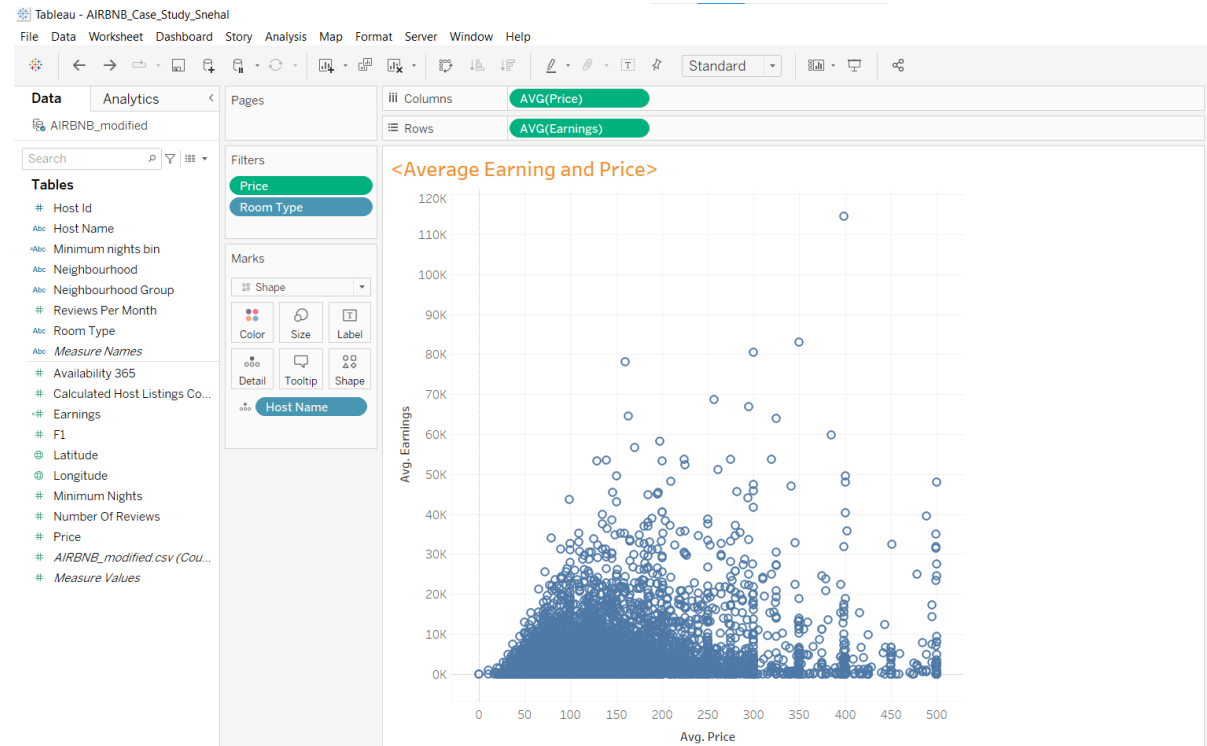
The Highest price range seems to be between 30 dollars to 150 dollars per day stay for most of the sites hosted.

- The Highest price range seems to be between 30 dollars to 150 dollars per day stay for most of the sites hosted.
- Still we can see there are many sites which cost more than 200 dollars per day and can even go upto 500 dollars.

Activate Windows
Go to Settings to activate Windows.

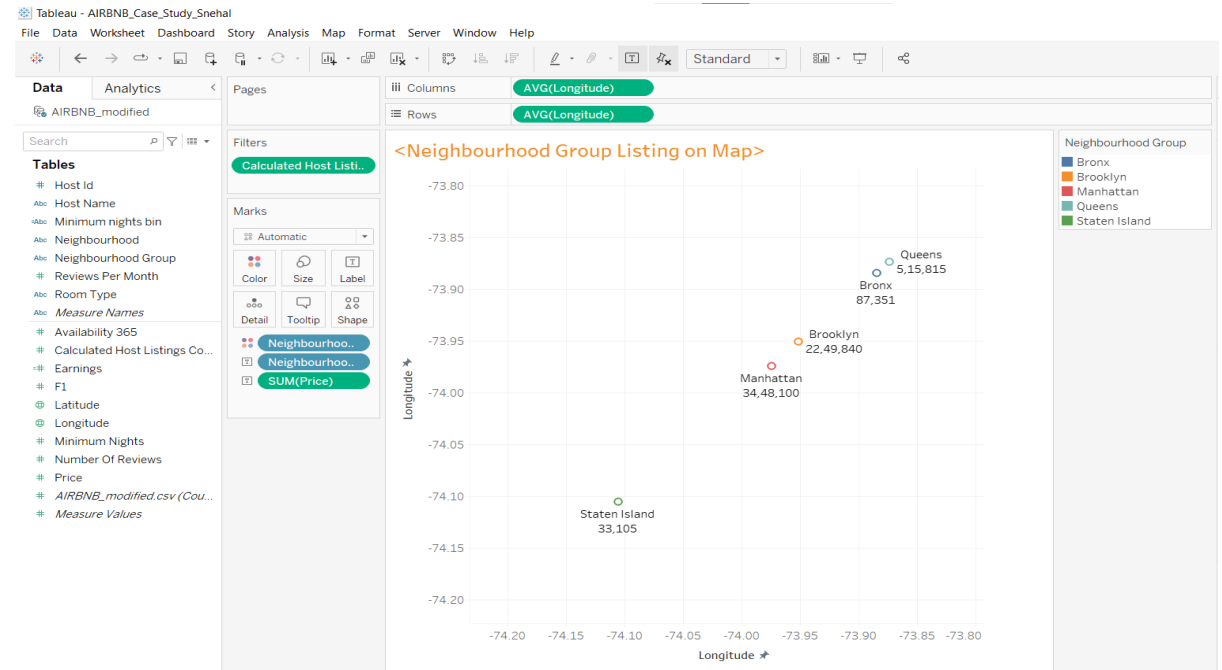
Average earning and price:

- According to this graph, the majority of individuals would have spent between \$40 and \$250. A typical host makes between \$6000 and \$7000 per year.
- The hosts who charge 170 or more as the standard fee make around 10,000.



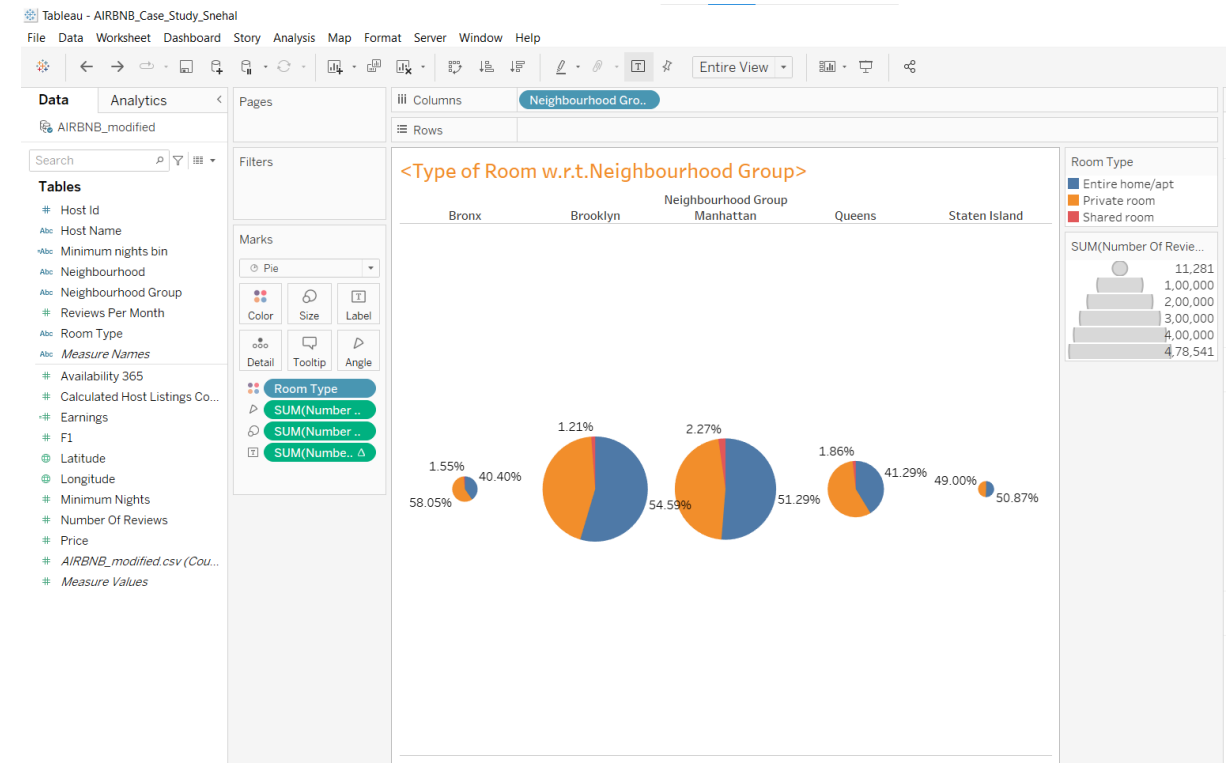
Neighbourhood group listing:.

- The map shows that Manhattan is higher and affordable for high class people for its tourist spots.
- Then Brooklyn is preferred by customers compare to Bronx and Queens.



Type of room type preferred by customer's w.r.t Neighbourhood group

- This graph shows that in Manhattan, Brooklyn, Staten Island entire home is preferred by customers whereas in Bronx and Queens private rooms are preferred.



Appendix – Data Methodology

- **Methodology Approach**

- Research Problem
- Business Understanding
- Type of Data Require
- Data Source
- Whom are we presenting?
- Analysis Done
- Recommendations
- **Method of Analysis along with code**
- Data Understanding and Preparation
- Variables overview
- Handling missing values and outliers
- Analyzing methods
- Evaluation of Methods
- Finding and Insights

- **Training Methods**

- Python used for Data Understanding, Pre-processing and general Univariate and Multivariate Analysis. –
- Tableau is used for in-depth Bi-Multivariate Analysis.
- Finding and Insights
- C:\Users\Lenovo\Desktop\AirBNB\Snehal\AIRBNB_Methodology_Snehal_Final.pdf

Thank You