Storytelling Case Study: Airbnb, NYC

By:
Padma Sandeep Varma Kalidindi
Shivam Garg
Laxmi Prasanna

AGENDA

A. Objective
B. Background
C. Key Findings
D. Recommendations
E. Appendix:
   - Data sources
   - Data methodology
   - Data model assumptions

OBJECTIVE

- Airbnb suffered a significant revenue loss during the time. Since people have started travelling once more, Airbnb is working to revive the industry and get ready to serve clients.
- Delivering the insights to data managers is the primary goal. principal data analysts understanding of the data to determine the decrease in Airbnb reservations in the NYC area
- Findings to identify the data's patterns
- Suggestions as to what might be done to reverse the decline

BACKGROUND

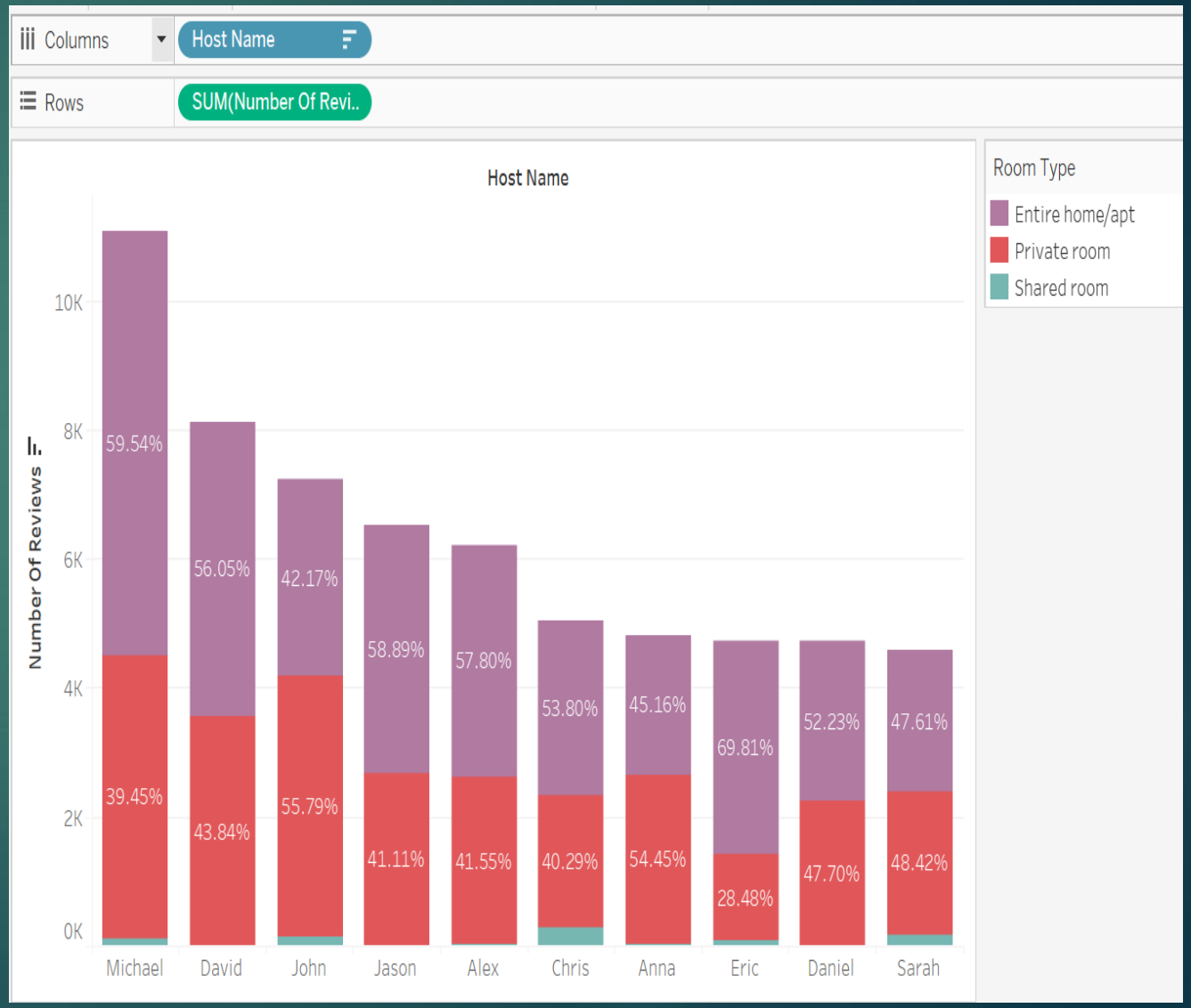
- Since a few months ago, Airbnb's revenue has significantly decreased.
- Airbnb wants to make sure that company is completely ready for this transformation now that the limits have started to decline, and people have started to travel more.
- As a result, analysis has been done on a dataset made up of different New York Airbnb listings.

Objective of the Analysis of the Airbnb NYC Data

- Customer preferences and ratings with average price of different hosts of Airbnb in were analyzed.
- The data was analyzed to derive key insights from the Pre-COVID period.
- The insights will be used to take decisions for the NYC Airbnb business for travel in post-COVID period.

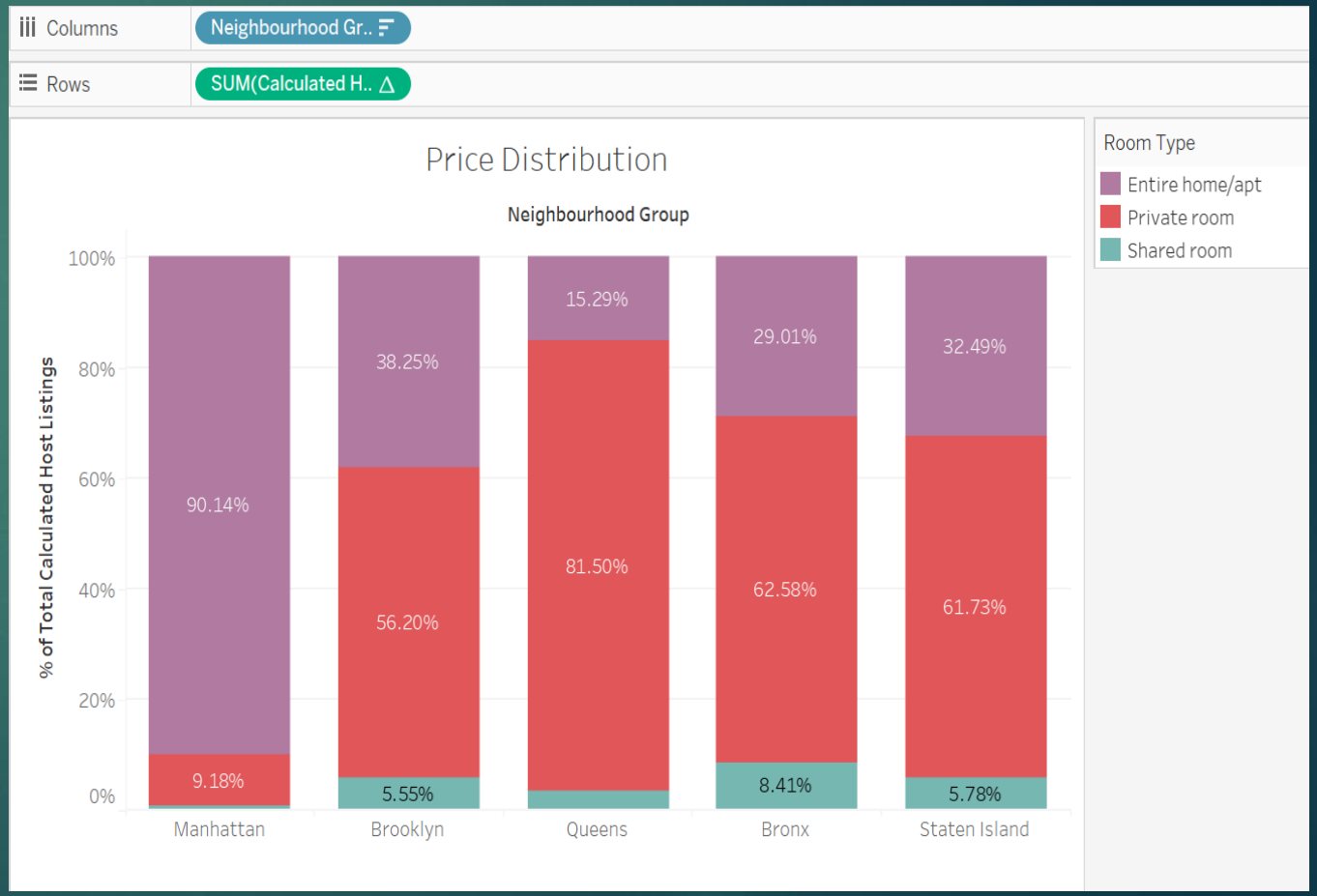
Top 10 Hosts by Reviews

- Over 50% of hosts prefer to rent out their entire home or apartment
- Shared rooms receive the fewest evaluations out of all the properties listed.
- Apparently, private rooms and entire homes/apartments are in high demand (more than 90% of ratings.



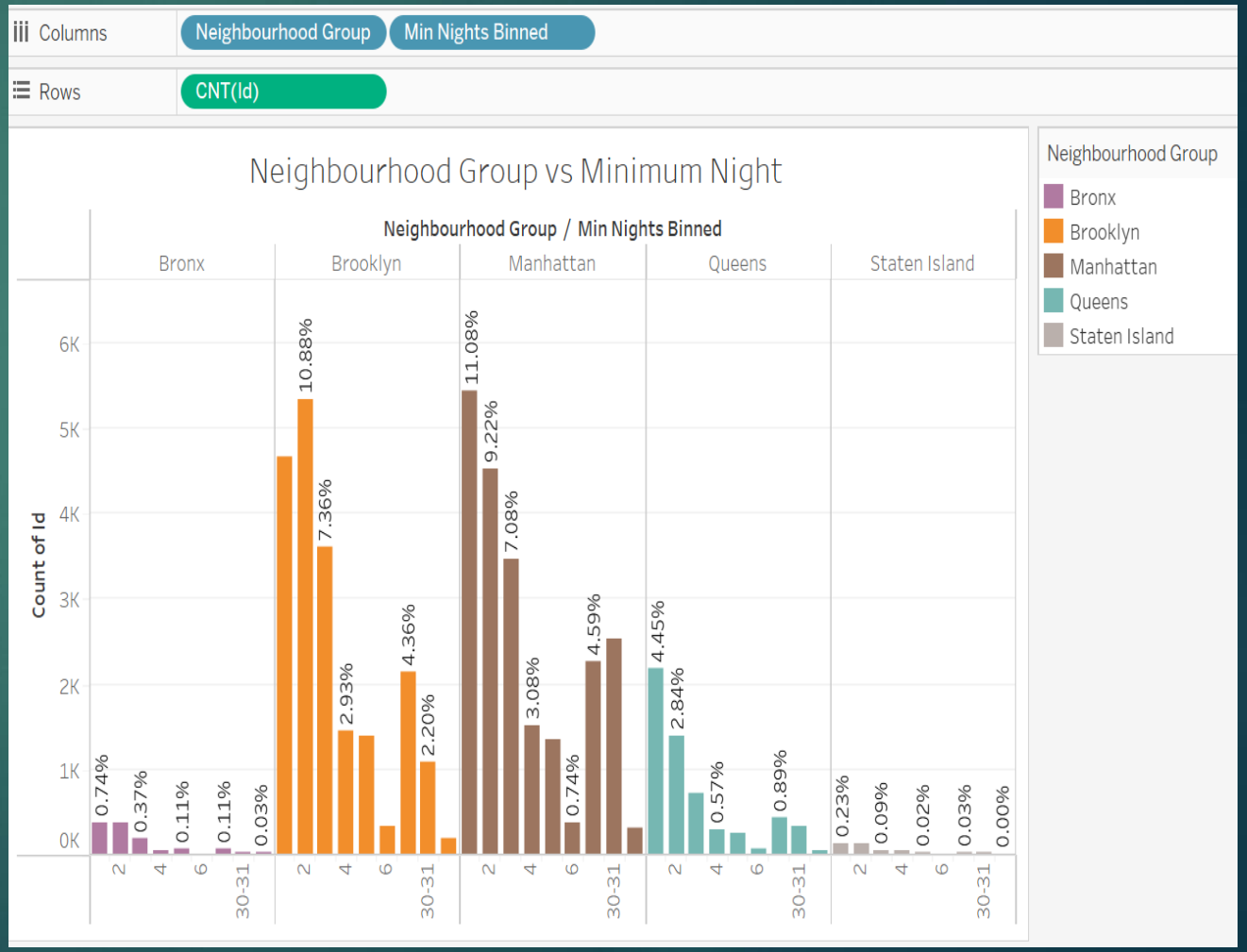
Customer Preferences of Properties in NYC Areas

- The properties in Manhattan are the most expensive than any other area.
- Manhattan has the highest contribution of 'Entire home/apt' compared to the overall contribution of 'Entire home/apt'.
- Queens has a higher contribution of 'Private room' compared to the overall contribution of 'Private room'.



Preferences of Neighborhood Group With Respect to Nights

- 20% of the bookings are made either in Manhattan or Brooklyn.
- As Manhattan & Brooklyn are expensive areas, majority of the people prefer staying below 3 nights
- Staten Island is still a developing place while Bronx is the poorest borough, only 10% of the people prefer renting out.



RECOMMENDATIONS

- Airbnb can list its hosts in 2 categories: Super Hosts & Regular Hosts
- Hosts with more than 80% reviews & providing minimum 10 stays in a year can be considered as Super Hosts
- Customers renting in Staten Island and Bronx can be provided with Offers to increase renting.
- Tourist packages or pick and drop to nearest tourist spots in NYC could be provided for customers renting in Manhattan and Brooklyn if the customers rent the property for more than 10 days which would increase long days bookings.
- Rest can be considered as Regular Hosts

APPENDIX - DATA SOURCES

I. Here is a snapshot of our data dictionary.
   - Host details such as Id, name, host name & host id
   - Property Listings information such as latitude, longitude, price, room type.

II. The team used the following data sources:
   - Data provided by Upgrad Team
   - Airbnb listings data from NYC
   - Survey conducted in 2019

APPENDIX - DATA METHODOLOGY

- We conducted a thorough analysis of the Airbnb dataset. The process included
- Understanding the Data using Python and Excel
- Cleaning the dataset by treating the missing values. Refer Data Methodology Document for clear understanding of Process.
- Visualization of the data using the Tableau tool to understand key inferences from the analysis.

APPENDIX - DATA ASSUMPTIONS

- We assumed the data prior to the COVID – 19 period was achieving the desired revenue.
- We assumed the company does not want to expand yet to new territories in NYC.
- The company's strategies are decided considering the travel will increase in the post COVID period.