

Storytelling Case Study: Airbnb, NYC

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Introduction

- ▶ We are going to do the Data analysis of Airbnb.
- ▶ The Management have noticed that from past few months the revenue of Airbnb is collapsing due restrictions.
- ▶ So as the Data analyst we need understand and find the problem statements.
- ▶ Since the situation is changed and restriction are removed the company wants to be prepared and plan accordingly to maximize the profits.

OBJECTIVE

- ▶ Airbnb is an online platform that facilitates the booking and renting of lodging and accommodations
- ▶ During the covid time, there was a major decline in revenue due to travel restrictions
- ▶ People have now started travelling again and Airbnb is aiming to bring up the business again and ready to provide services to customers.

Problem Statement

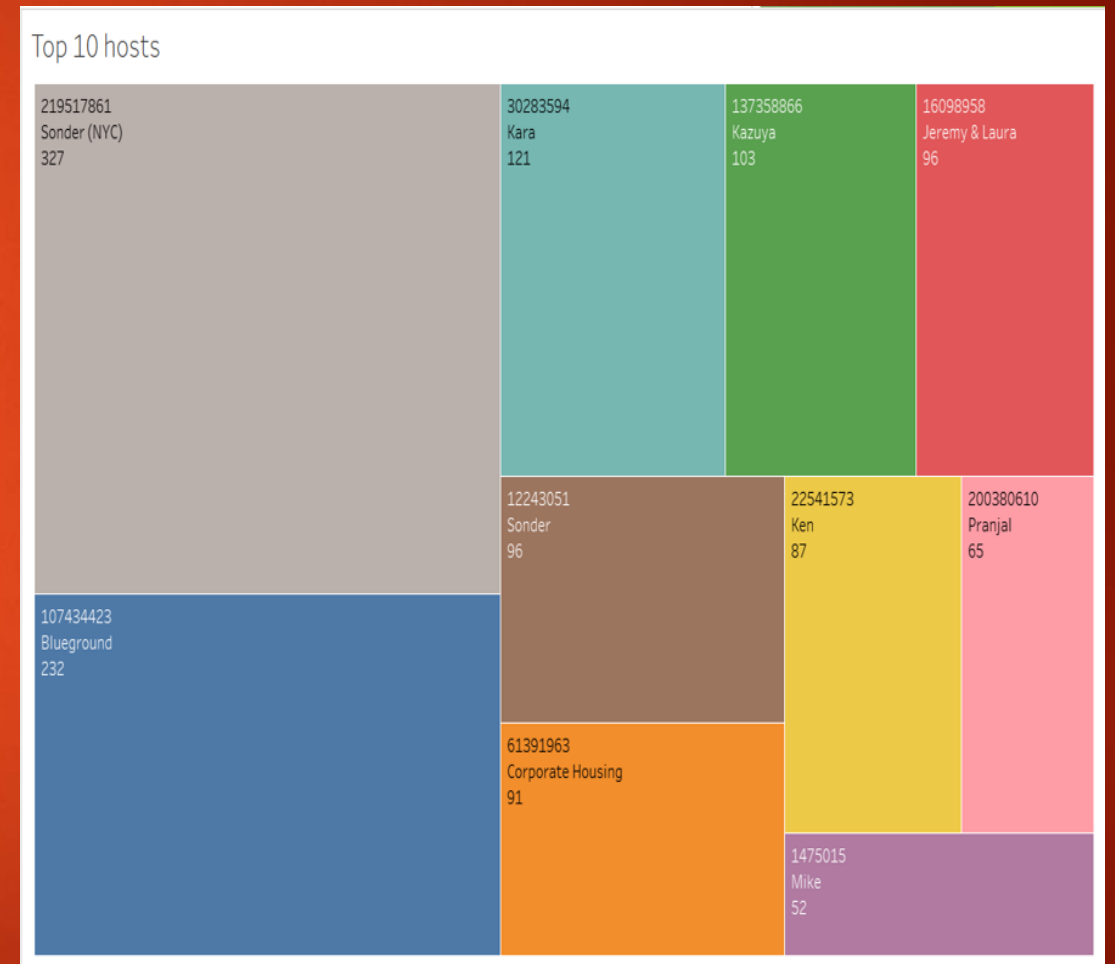
1. Which type of hosts to acquire more and where?
2. The categorization of customers based on their preferences.
 - What are the neighbourhoods they need to target?
 - What is the pricing ranges preferred by customers?
 - The various kinds of properties that exist w.r.t. customer preferences.
 - Adjustments in the existing properties to make it more customer oriented.
3. What are the most popular localities and properties in New York currently?
4. How to get unpopular properties more traction? and so on

Data Cleaning and Preparation

- ▶ We need to understand and analysis the data of the dataset in python.
- ▶ The data need to be cleaned by removing the duplicates and missing values so that it doesn't make the calculation incorrect.
- ▶ We use the median method to handle missing values.
- ▶ Identified null values in both last_review, and reviews_per_month of around 20.55%.
- ▶ Certain Columns are also be dropped which are unnecessary using mode for the categorical and median for numerical datatypes.
- ▶ Removed the Null Values.
- ▶ Then we have checked if there are any outliers in 6 continuous columns and treated the using capping method.

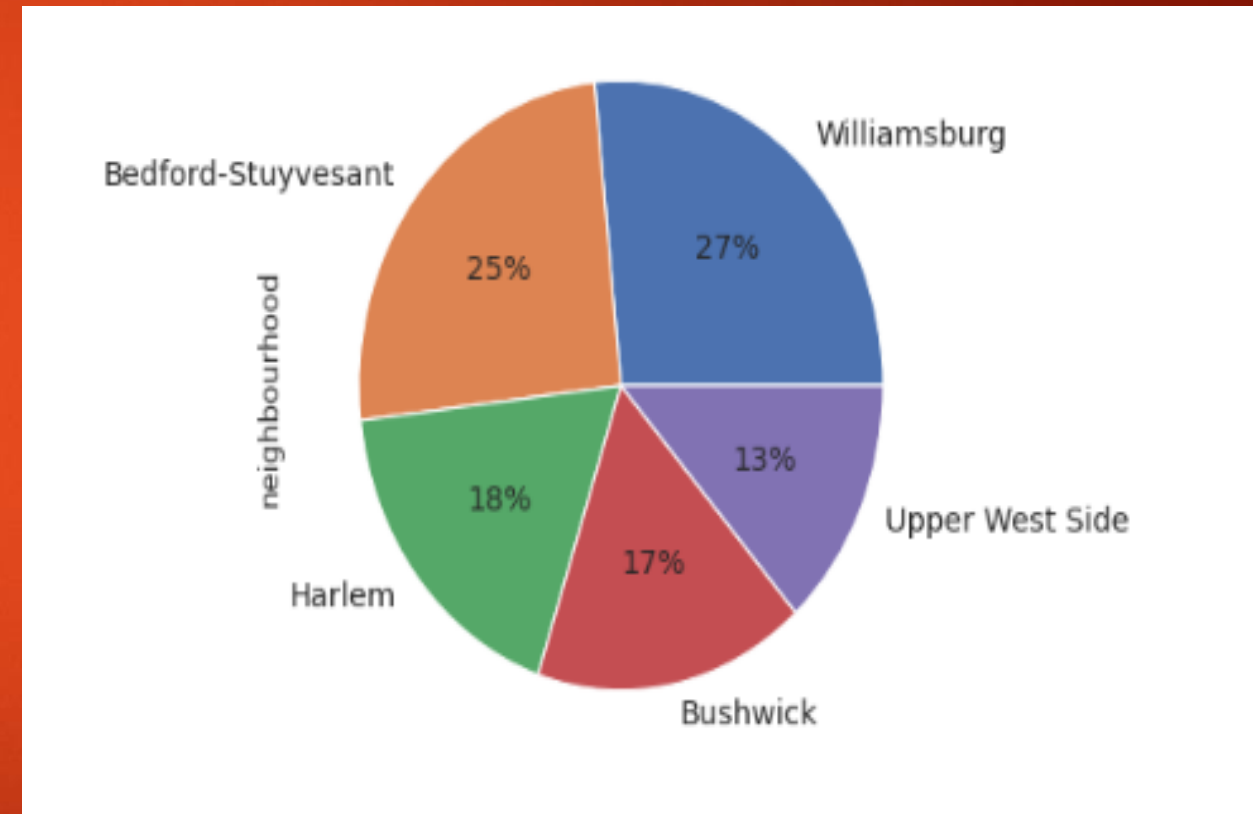
The Top 10 Host

- 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.



Targeted Neighbourhood

- ▶ The most popular destination as per the analysis, which show which neighborhood has how much percentage of business - Williamsburg with 27%, Bedford-Stuyvesant with 25%, Harlem with 18%, Bushwick with 17% and Upper West Side with 13%.
- ▶ These location are more popular than others because it's situated near beach or service are better than most.
- ▶ Bedford – Stuyvesant had 70,599 customers and Williamsburg had 56,339.



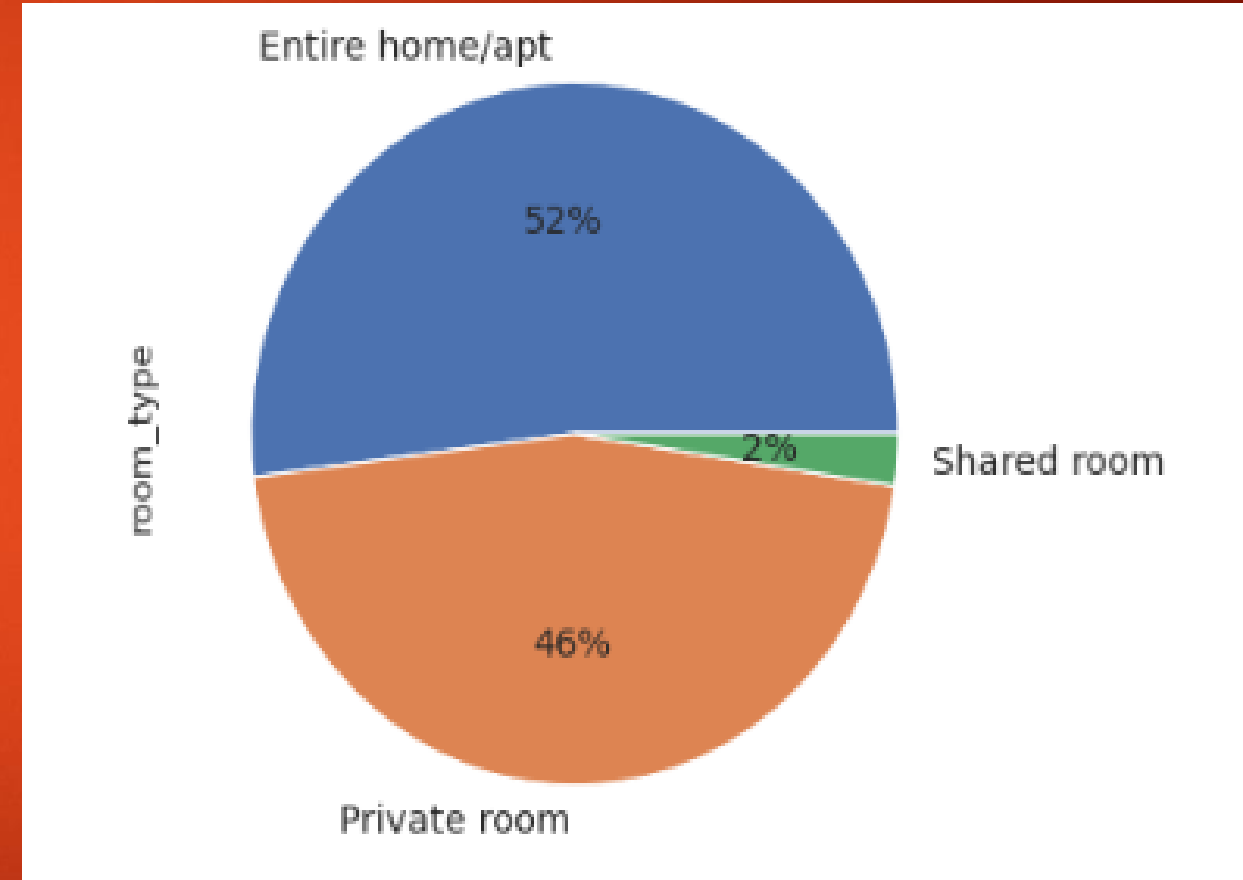
Average Price Prefer by People



- As per the median Price the average price is been calculated.
- An entire home/ apartment prefer by customer is 160.
- Average Price Preference by people for the Private Room is 70.
- Shared Room average price preferred is 45.

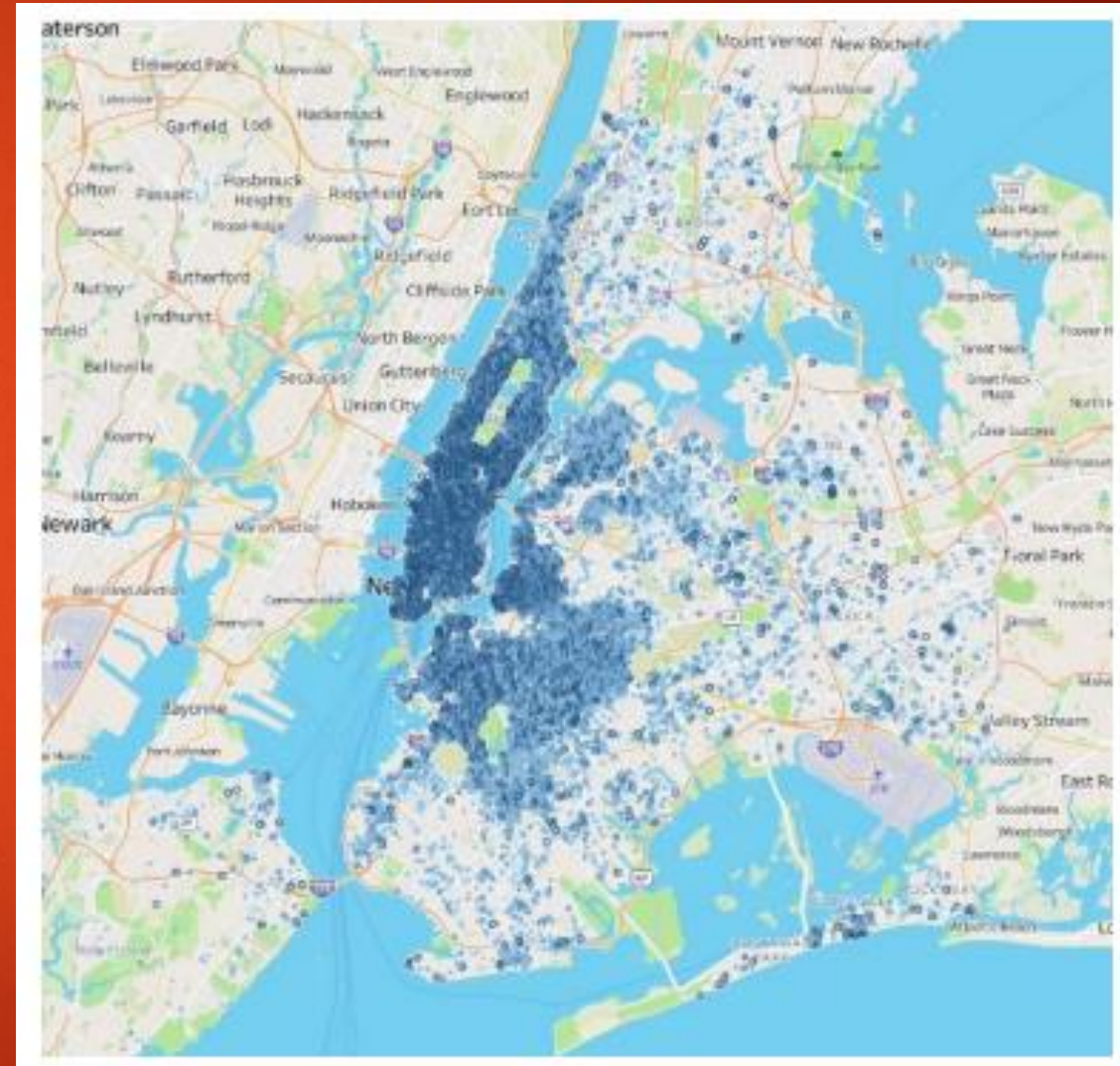
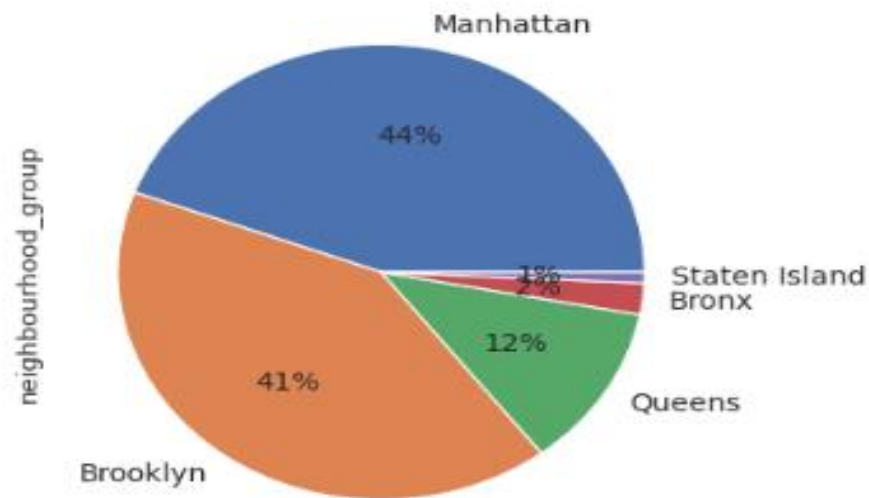
Types of Properties by Customer Preferences

- ▶ Three types of room are available – Entire Home/ Apartment, Private Room & Shared room.
- ▶ As the analysis people prefer 52% people want entire home/ apartment, 46% people want the Private room and rest of 2% will go with shared room.
- ▶ To increase the sales of the Shared rooms Airbnb could provide offers, discounts and promote it.



Most Popular Localities and Properties in New York

- ▶ As we can see in map the darker side represent the popular areas of and lighter area represent the least popular areas.
- ▶ The most popular Area are Manhattan, Brooklyn, & Queens are lot popular than the Bronx and Staten Island.



Recommendation

- ▶ The least Prefer room is shared in that case Airbnb must promote the shared room type to increase revenue and it's sale.
- ▶ The most average price range which cover most customer is 40\$ to 160\$ dollar.
- ▶ The company should focus on these price range (40\$-160\$) where the customer will be happy and company will have lots of business.
- ▶ The company must promote the sales of the entire house in the Bronx and Queens and private rooms in Manhattan and Brooklyn.
- ▶ In future there is possibility of increase in sales of clients may rise if there are more coastal purchases and new construction.
- ▶ The desired destination is Manhattan and Brooklyn.