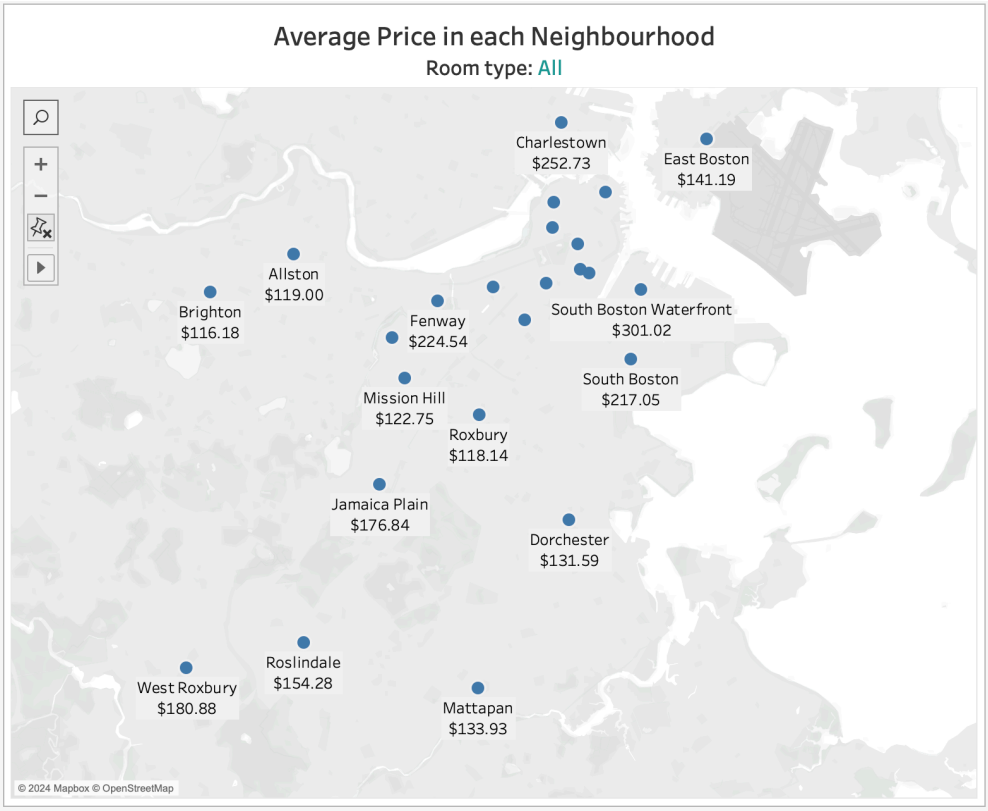
Dataset:

The dataset I chose for this project is AirBnb. This dataset has various features that have information regarding Airbnb listings in Boston. This dataset includes listing information like pricing, availability, host, review information, etc. This dataset can be used for analysis of the Airbnb market and make decisions for any future implementations or investments.

Analysis 1:

Finding the average price in each neighborhood:

I created a map to show this. The columns have longitudes, and the rows have latitudes. Grabbing the price column to the label and setting it to average gives us an average price for each neighborhood.

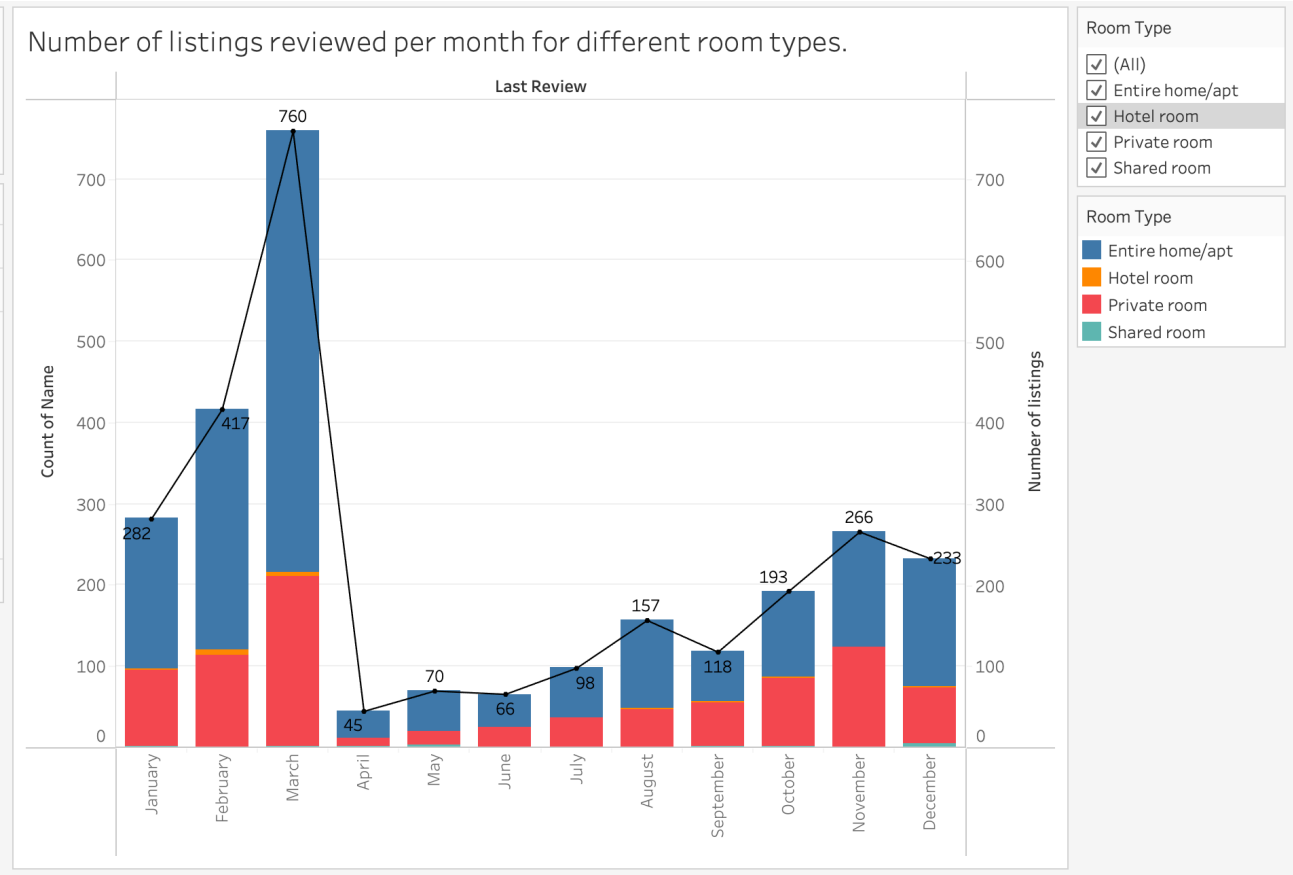


From the above map, hosts can understand the pricing across all the neighborhoods. This helps them determine where to invest for listings in the future and also includes amenities, if any, that could affect the prices. As we can see, the South Boston waterfront has the highest average price for listings. This could be because of the bodies of water nearby. The lowest price falls near Brighton, which is near the top left corner of Boston. With this, new hosts who want to start investing can look to know the prices in each neighborhood.

Analysis 2:

Number of listings reviewed per month for different room types:

I have created a bar graph for this. I have included the count of listings that have been purchased for each month across a year. Using the 'Last review' feature, we can know the listings that have been sold. I have also categorized the 'Room Type' for each month, this is done by adding the 'Room Type' to the color section in Marks. I have added a line chart to make it look visually appealing.



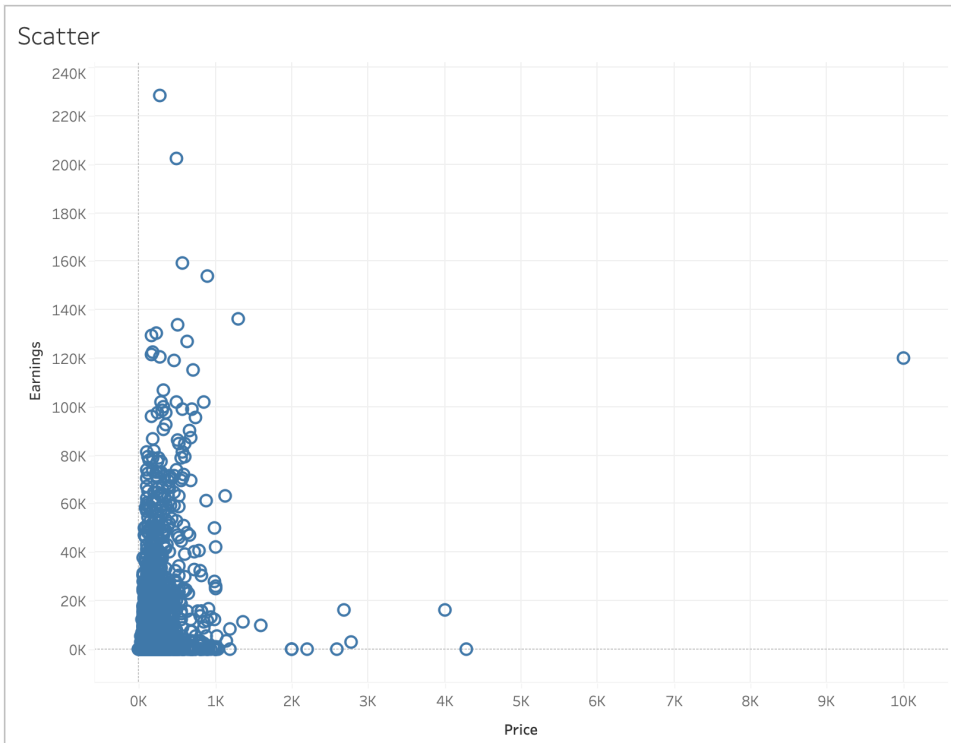
The above bar graph can be used for the popularity of individual 'Room Type'. By this, we can get to know the most purchased listing and simultaneously the most reviewed 'Room Type'. We can also see that in March most of the purchases have been made. Additionally, it is seen that the most reviewed 'Room type' is Entire home/apt. By this, hosts can analyze which room type has more demand during certain times of the year. By this, we can also observe that the room types like hotel rooms and shared rooms must be improved to make them most reviewed. Some real estate investors can also use this to plan for which properties to focus on for investment. User feedback is an important element to be considered in any aspect of business, and one such thing here is the reviews. These reviews help the hosts to imporve their properties and attract more people.

Analysis 3:

Relation between price and earnings:

To show this, I have used the price as a row and the earnings as a column. Earnings is a calculated field; this is made by the formula : [Price]*[Number Of Reviews]. Here, I assumed that the purchases

for hosts are the reviews they get. So, the total number of reviews a host gets is by selling their property. By this, we can calculate their earning just by multiplying the price of the reviewed listings for a particular host.

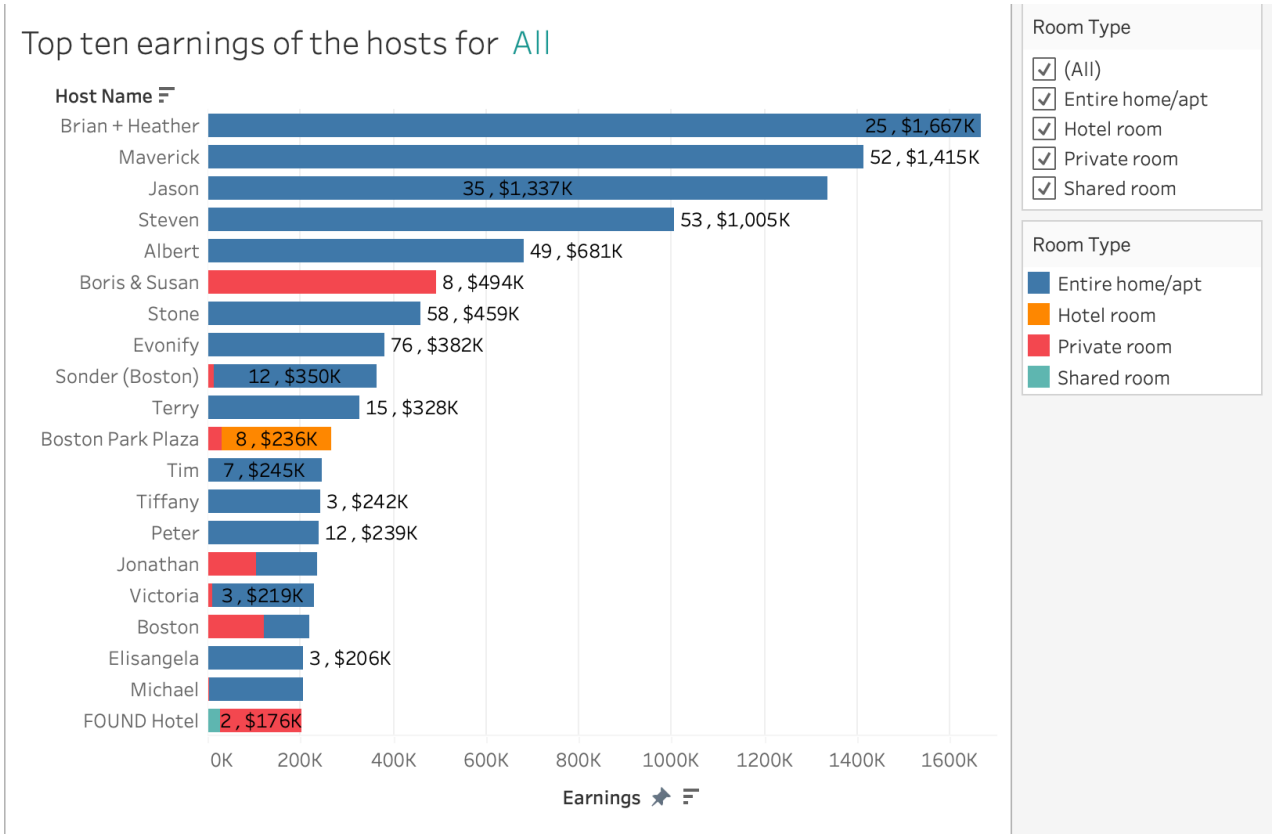


From the above scatter plot, we can easily say that most of the earnings made are from selling inexpensive properties. We see that the listings that range between the price of 0k to 1k have a high amount of earnings. The hosts must look into the room types they invest in and the price range they should be putting for their properties that could give most of the profits. Hosts can adjust the prices according to the demand of the properties. New hosts can know the average prices they should charge for a particular property to gain more profits in their initial business days. This also helps to plan for resources that a host needs before investing.

Analysis 4 :

Top ten earnings of the hosts for different room types.

I have taken the relation between the host names and the sum of earnings for each host to represent the



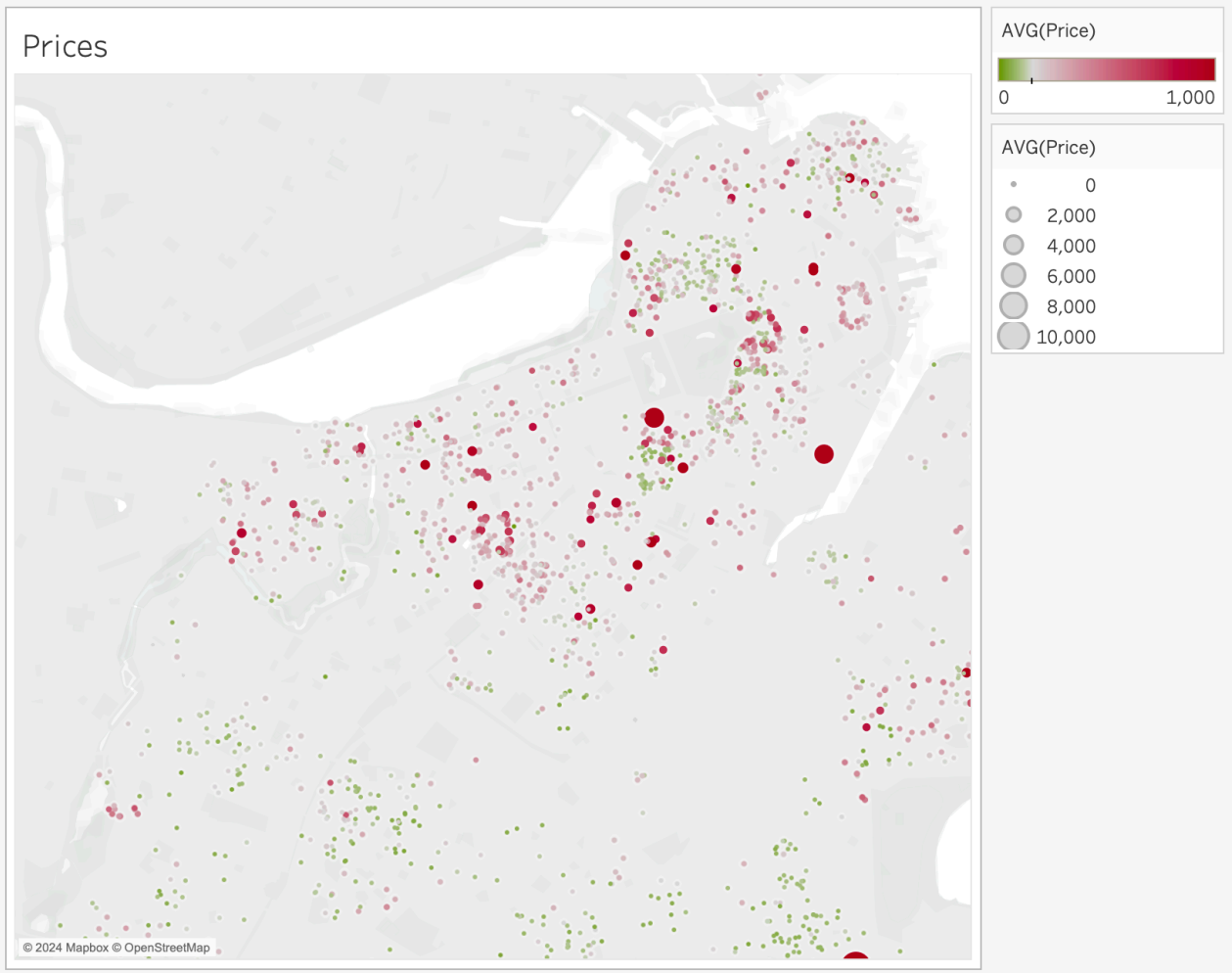
hierarchy of the hosts by their earnings. I have also added the number of listings each host owns. Additionally, I have categorized the type of room each host owns by color.

From the above bar graph, it is clear that 'Brian + Heather' has the highest profits just by owning 25 listings. Having owned 76 listings, Evonify has only $459k in earnings. By this, we can understand that the type of housing must be considered while investing as it directly affects the price. We can also see the types of rooms the search host owns. Seeing this, hosts can analyze the type of room to establish more to gain profits.

Analysis 5:

Map of prices:

I have chosen to create a map showing the areas with average prices. I have used bubbles on the map to show the prices. The larger bubbles have high average prices, and the smaller bubbles have lower average prices. The bubbles that are in red are higher than the average and the bubbles in green are lower than the average.

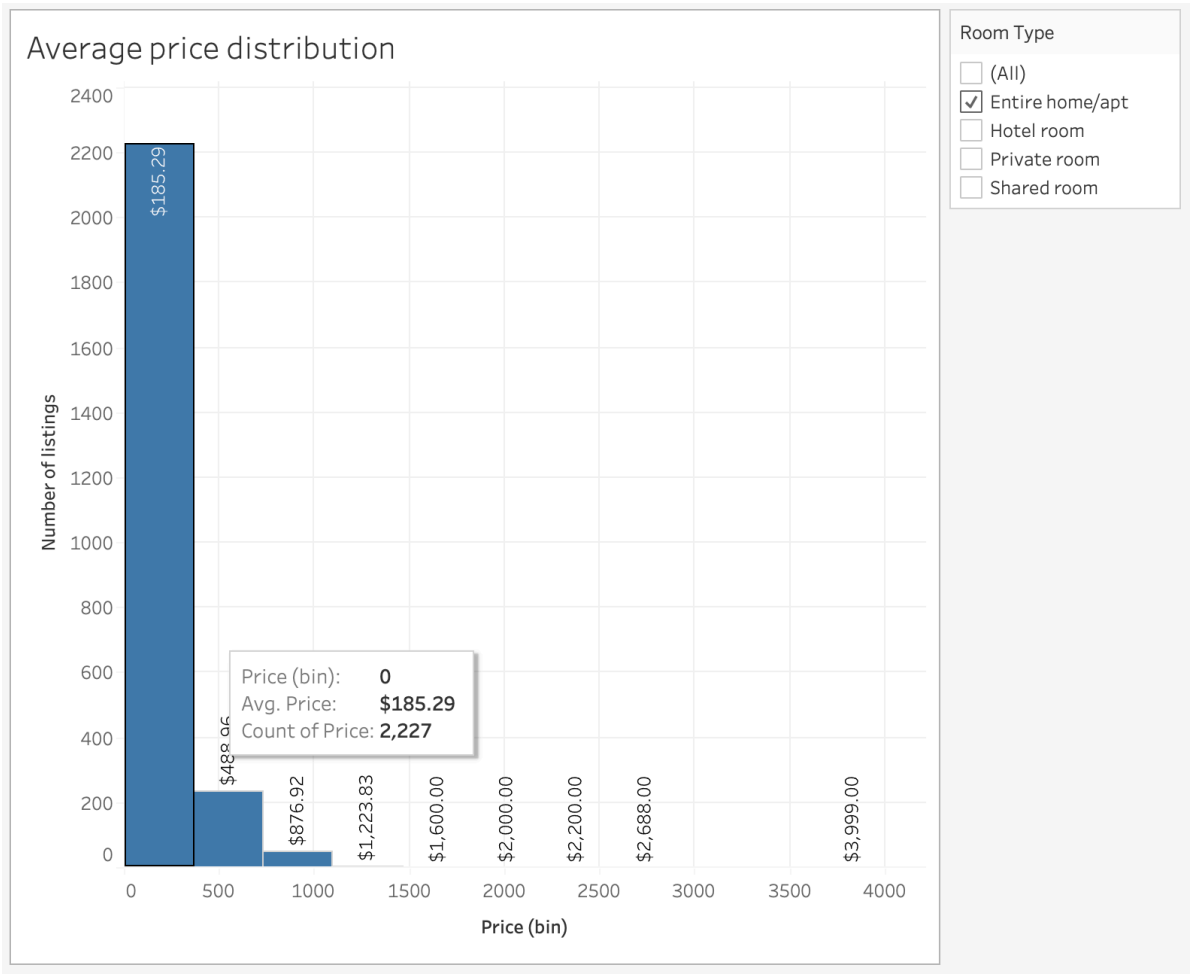


We see how the prices are distributed across the city. We can see the clusters of prices that are economical and the clusters of prices that are expensive. This helps hosts improve in terms of the areas they are investing. Hosts can also choose the property type to invest in the dense clusters.

Analysis 6:

Average price distribution:

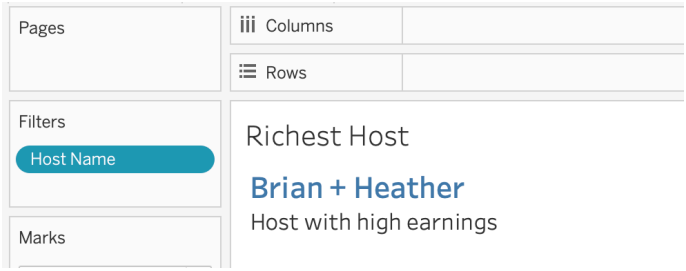
This is similar to the above map but is a bar graph. Here, we see the number of listings per price. This is made by putting the count of prices on the rows for the number of listings and the price on the columns for their corresponding prices.



In the above graph, we can see that the listings ranging from 0 to 500 are more and have an average price of $185. And we see that there are very few listings that are above $1500. This analysis shows us that the maximum listings are of low prices and we have very few expensive listings.

Analysis 7:
Single value for the richest host:

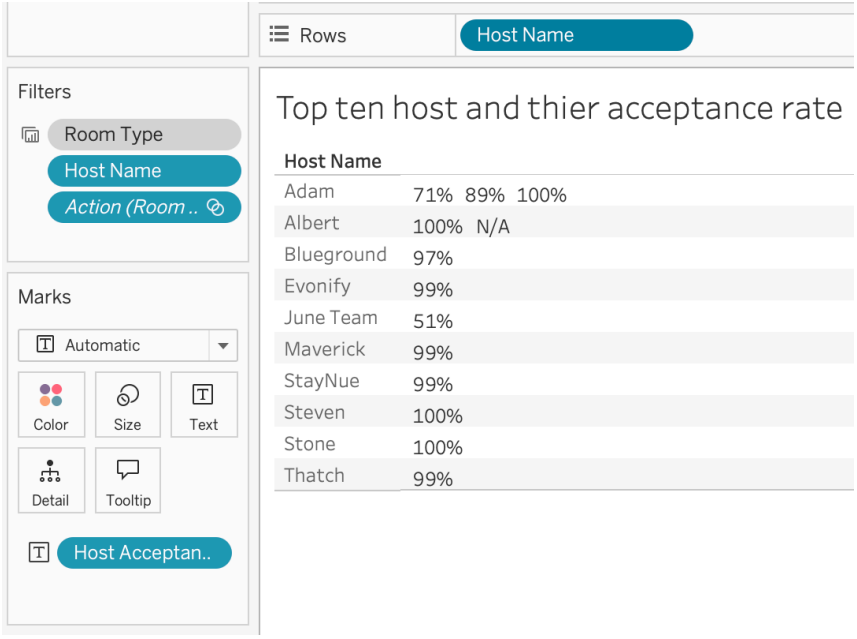
To know the richest hosts, I have selected the host names and filtered them by their earnings. The name of the member with the highest earnings is displayed.



We see that Brian + Heather are the richest hosts as they earn the most.

Analysis 8:

Table for the acceptance rate of the hosts:
The table below shows the top ten hosts for their acceptance rates. This is done by putting the hostname and adding the acceptance rate to the label.

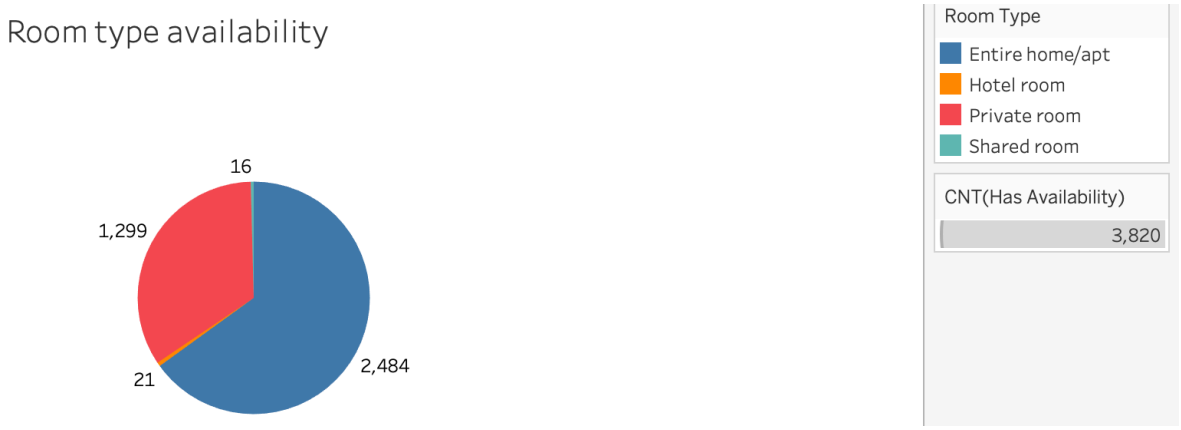


We can see that Adam is the host who accepts the most. Clients can look this up for their analysis to purchase under a host as per their acceptance rate.

Analysis 9:

Pie chart for the available rooms:

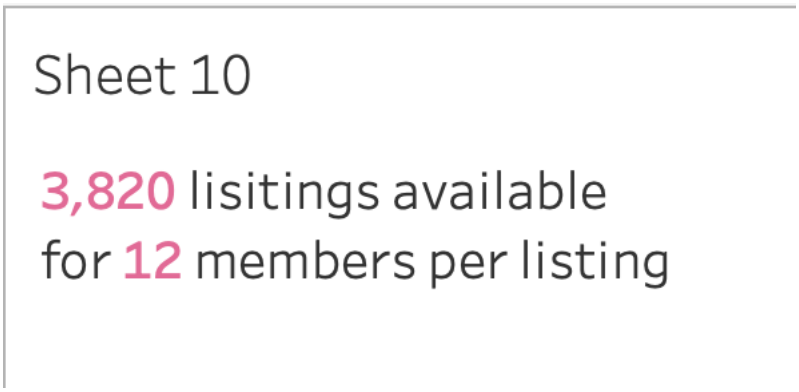
I have made a pie chart to show the number of rooms available. For this, I have taken the ‘Room type’ and added the availability 365 to the filter. I have also added the number of listings of that room type.



We see that most of the rooms available are the Entire home/apt. And we also see that Hotel rooms and shared room are less available as they are less in count.

Analysis 10:

Single value for the number of listings available for the number of roommates. This is made by putting the count of availability and the accommodates.

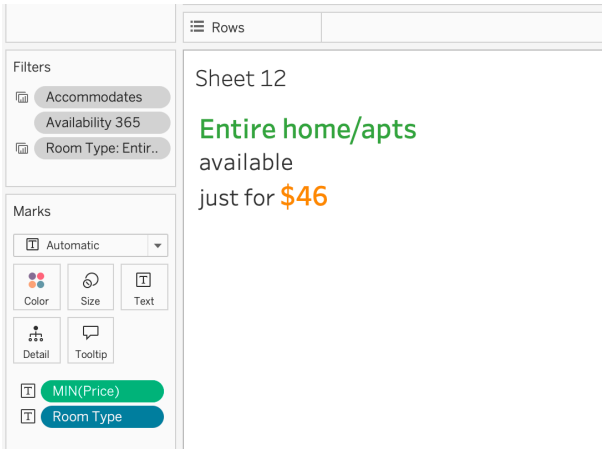


From the above, clients can have an analysis of the availability of the listings for the number of members entering the room.

Analysis 11:

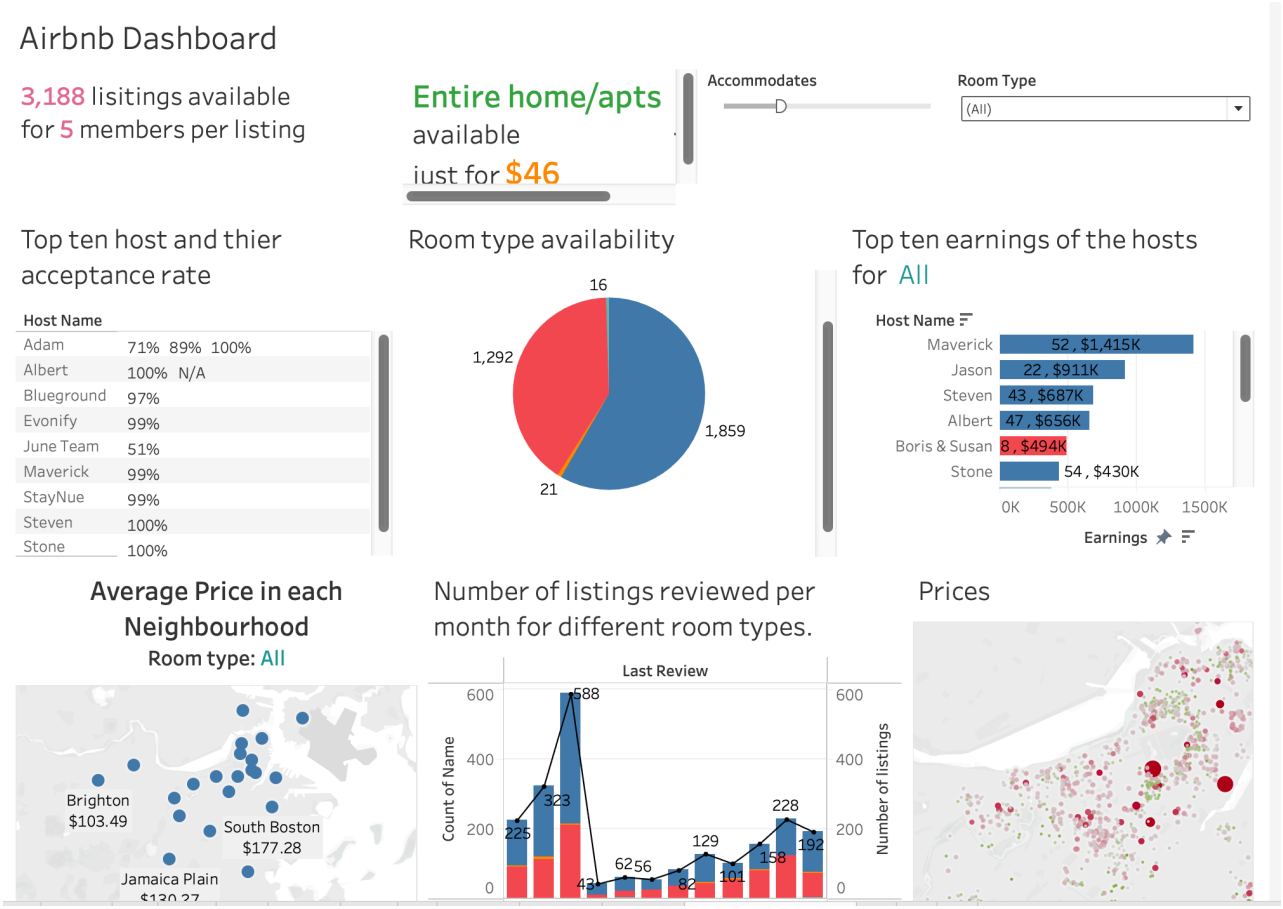
Type of room available for the lowest price.

This is a single value chart made by putting the price and Room type. I have filtered the room by the least price. From this hosts can attract the users to sell most of their listings.



Dashboard:

All the analyses made above are brought together into one dashboard. I have used actions on the pie chart to show all the information by the type of 'Room type'. By clicking on the room type we can see all the analysis together. I have also made a filter for the number of accommodates to make it easier for analysis as per the number of accommodates.



Conclusion:

The main object of the dashboard is to give different analyses for the hosts to develop them in the financial aspects. By adjusting the accommodations and the room types, one can know the available room type that is cheap and the acceptance rate for such room types, average pricing of such room types, top hosts who earn the most with such room types, etc. In conclusion, by putting such appealing visuals and single values, hosts can easily get the information for their businesses. We can also see that by grouping the features, there is a principle of proximity, and by using similar colors, we see the principle of similarity.

I have chosen to gather this information for the hosts. Hosts can analyse a lot of information ising one dashboard. This is made by looking up the columns. As we see I have also created a filed for the earnings. This is made to make the hosts know their earnings.