Faculty of Computing and Information Technology

Department of Mathematical and Data Science

Bachelor of Science (Honours) in Management Mathematics with Computing
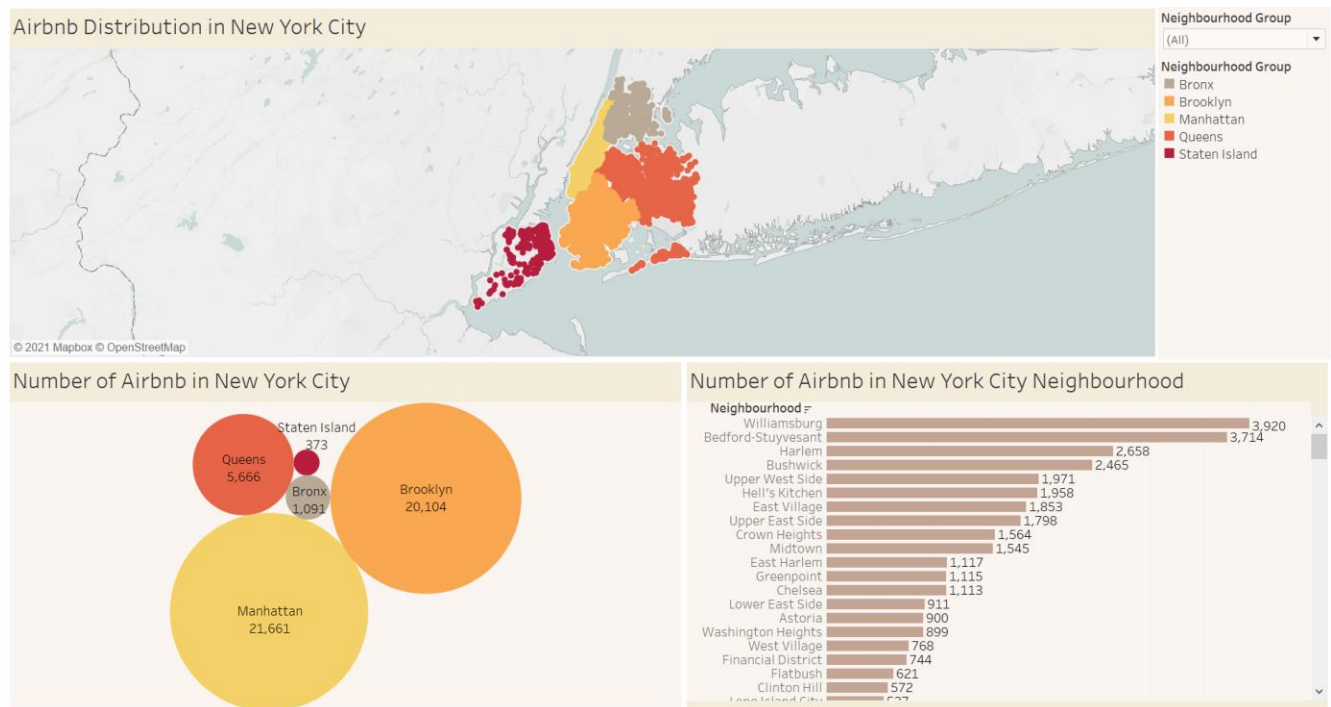
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BAMS3043 Mathematical and Statistical Software
Assignment 3

Programme of Study: RMM3S1G2

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Figure 1.1 Total Number of Airbnb in New York City

The dashboard above illustrates the total number of Airbnb in New York City presented in a map view, grouping by neighborhood group in the form of bubble chart and the available area in that particular neighborhood group in the form of bar chart. By clicking one of the bubbles in the bubble chart, the user can see the available area and number of listings of Airbnb in that particular neighborhood group. The information shown can let the management team figure out the overall host listings in New York City to make better decision making in increasing the supply of Airbnb accommodation in particular neighborhood groups.
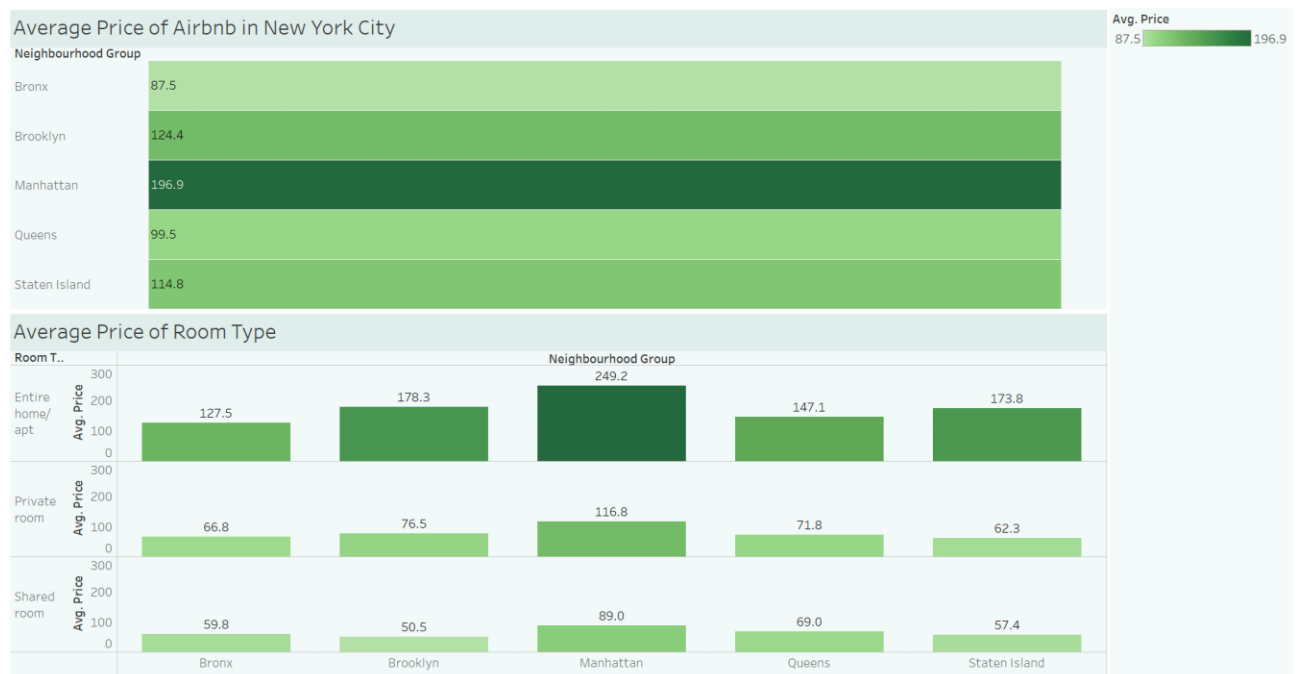
Figure 1.2 Average Price of Airbnb by Neighborhood Group & Room Type

The dashboard above illustrates the average price of Airbnb by neighborhood group and room type in the form of bar charts. By clicking the chart on top, the user can easily see the mean price of each room type in that particular neighborhood group. The information shown can let the management team to have better decision making in selecting the potential location and room type to add on and also help in adjusting the price of Airbnb.
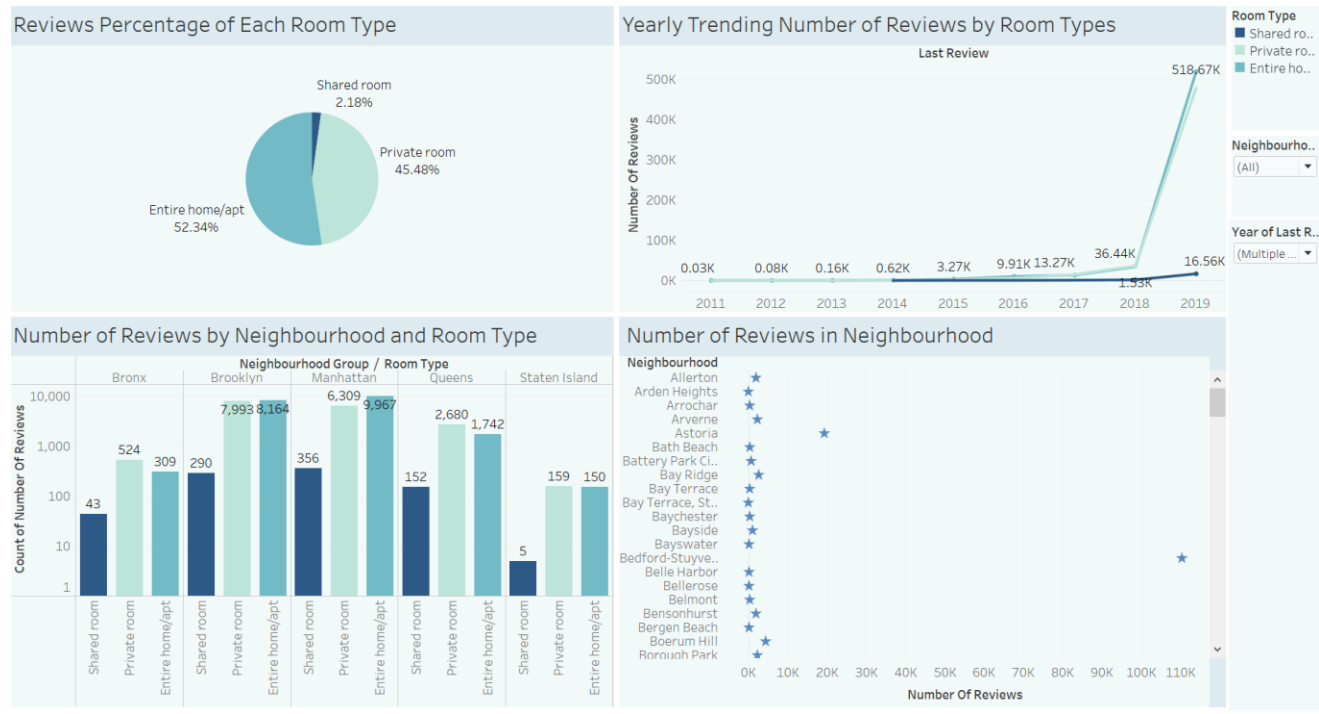
Figure 1.3 Reviews of Airbnb in New York City Neighbourhood

The dashboard above mentions that each review for the airbnb is located in New York city. The first pie chart status shows the review percentage of each type of room that is reviewed by each customer. This chart allows the management team or person in-charge to easily know which is the famous room type those customers like to rent or book most. In addition, the line graph status in the upper right corner shows the review trend of each room type by year. This will help follow up and understand the trends so that the marketing situation can be formulated in a short period of time.

The bar chart status displays the review of room type based on the customer in each neighbourhood. Easily to let the management team or person in charge understand the rate of room type in each neighborhood. Last, the chart status in the lower right corner is the number of reviews in each neighborhood. It shows the total number of customers who have rented or booked on Airbnb. So we can know which Airbnb in each of the neighbourhood areas is the most famous.
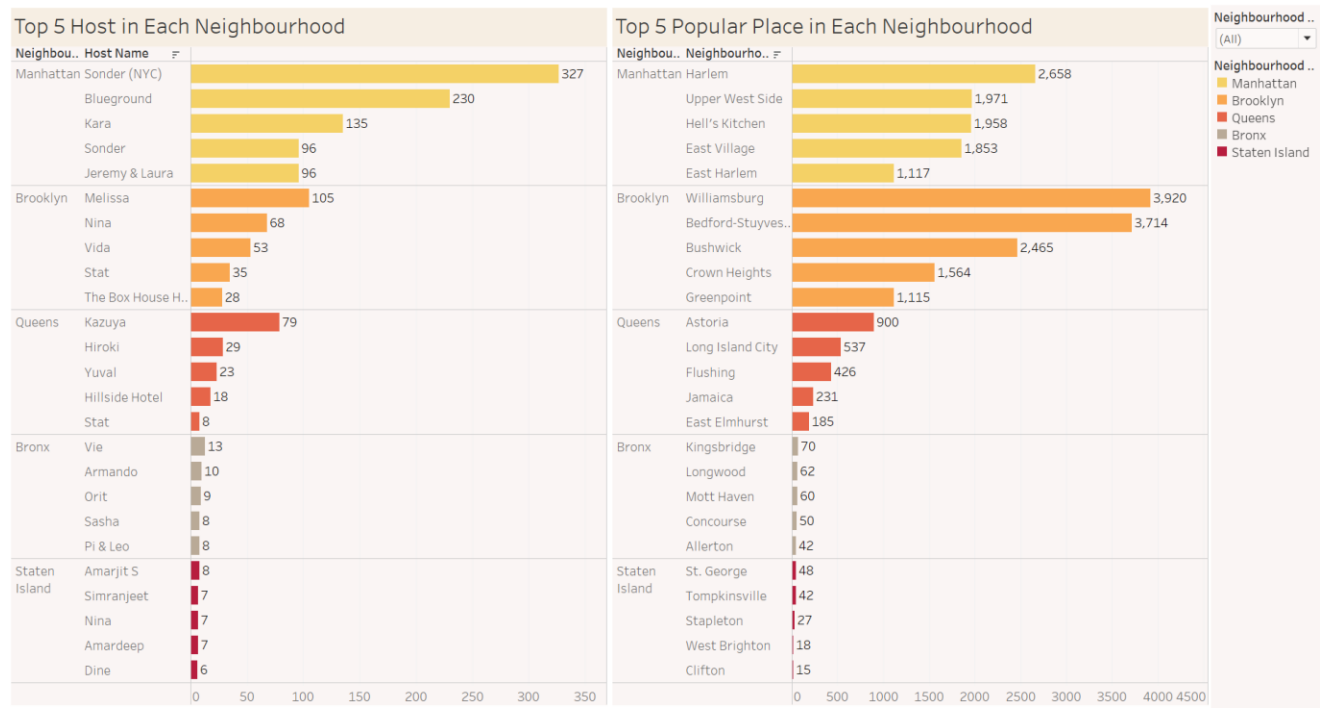
Figure 1.4 Top 5 Host and Popular Place in Each Neighborhood

The dashboard above reveals the 5 busiest hosts and also popular places in each neighbourhood group of New York City. The horizontal bar chart on the left shows the 5 hosts that own the greatest number of hosting listings in each neighbourhood group. On the other hand, the horizontal bar chart on the right shows the 5 places that receive the largest number of reviews. This will recommend good choices of Airbnb for the customers based on their destination. By clicking on any bar on the left chart, the user can also determine the 5 most reviewed Airbnb owned by that particular host.