**Capstone project submission**

**Short summary on capstone project**

**BY TEAM BRAINSTORMERS:**

Airbnb is an online marketplace connecting travelers with local hosts. On one side, ofthe platform enables people to list their available space and earn extra income in the form of rent. On the other, Airbnb  enabletravelers to book unique home stays from local hosts, saving them money . For this project I have the Airbnb dataset with approximately 49000 rows and 16 columns.

Firstly I performed data wrangling over the raw data for further analysis. Then I analyzed the numerical and categorical columns of the dataset. Further I analyzed the price, count of room types, availability, number of night stays and top hosts.

For room types, I find the average price of every room type in different neighborhood groups. Through this I made conclusions over the price and expensive neighborhood group.

For availability, I find the availability of listings in different neighborhood group. This helped in identifying the busiest neighborhood group.

This Airbnb ('AB\_NYC\_2019') dataset for the 2019 year appeared to be a very rich dataset with a variety of columns that allowed us to do deep data exploration on each significant column presented. First, we have found hosts that take good advantage of the Airbnb platform and provide the most listings; we found that our top host has 327 listings. After that, we proceeded with analyzing boroughs and neighborhood listing densities and what areas were more popular than another. Next, we put good use of our latitude and longitude columns and used to create a geographical heatmap color-coded by the price of listings. By basic inspection, a particular property name will have one particular host name hosted by that same individual but a particular host name can have multiple properties in an area. So, host name is a **categorical variable** here. Also neighbourhood group (comprising of Manhattan, Brooklyn, Queens, Bronx, Staten Island), neighbourhood and room type (private, shared, entire home/apt) fall into this category of id, latitude, longitude, price, minimum nights, number of reviews, last review, reviews per month, calculated host listings count, availability 365 are **numerical variables. Manhattan** has more listed properties with **Entire home/apt** around 41% of total listed properties followed by **Brooklyn** with around 51%**. Private rooms** are more in **Brooklyn**as in 33% of the total listed properties followed by Manhattan with 41 % and Bronx with 52% of them. While 52% of **private rooms** are from **Queens**. Very few of the total listed have shared rooms listed on Airbnb where there’s negligible or almost very rare **shared rooms** in **Manhattan with 18%** **and Bronx with 20% .** We can inferthat **Brooklyn, Queens, Bronx**has more**private room** typeswhile**Manhattan** which has the of listings in entire NYC has more **Entire home/apt room** types. It clearly indicates that people mostly prefer living in an **entire home/apt** on 8 night highest people stay night maximum Bronx, Brooklyn , Manhattan Queens , Staten Island. Shared the room average stay 6-7 night. Number of different hosts and areas we can see most number of listing are from Manhattan create sonder (NYC).As we can see different least number of listing are from Manhattan created as corporate house.it the prediction people are location , price , reviews etc. Different between area and minimum nights, and show the area minimum night. In the neighbourhood group Manhattan has the highest number or night, In the group Bronx and Staten Island has the lowest number of nights. We can see that group of between night and price is minimum, most people prefer to stay in nights where price is less. Mostly people difference of traffic among different areas. We have room type and minimum number of night stay and the room type we have entire home / apt, private room, shared room. The neighbourhood group, room type, minimum night people are staying. The Manhattan has maximum number of night stay in room, and Staten Island has minimum number of night stayed in shared room. Most people preferred to stayed in entire home/apt type of room to stay because homely feeling and no different areas. Very few people preferred shared room because of less price and affordable for few night. The neighbourhood group has highest price and average price for listing and maximum price of rent Brooklyn, Manhattan and minimum price of rent Queens, Staten Island, Bronx . We can state that has the highest range of price for the listing with about $140 highest range of Manhattan in group . Ans the last reviews on the basis of data highest review of based on last total number of maximum neighbourhood by customer . Highest reviews of date (2019-07-05) of the data. We can see that Jamaica has the highest number of reviews in group. The private room and entire home/apt are highly preferred by most people in group.