Analysis of AirBNB growth for several big cities across the world.

ANJALI KUMARI

AGNIDEEP MUKHERJEE

Introduction

➢Airbnb was founded in 2009 and has grown rapidly by generating value through a business model based on the sharing economy.

➢Property owners can profit from underutilized assets thanks to the Airbnb business model.

➢We shall look at how some of the world's most happening cities, including London, Paris, Istanbul, New York, and Dublin, have grown in terms of revenue and accommodation capacity over time.

➢We will also look for patterns in how the business was affected by the Covid-19 pandemic.

Data Collection

➢ Data has been collected from: http://insideairbnb.com/get-the-data.

➢ Approximate file size: 1GB.

➢ Table contains 4,51,285 rows and 76 rows.

➢ Our dataset qualifies as Big Data by the virtue of 2 'V's – Volume and Variety.
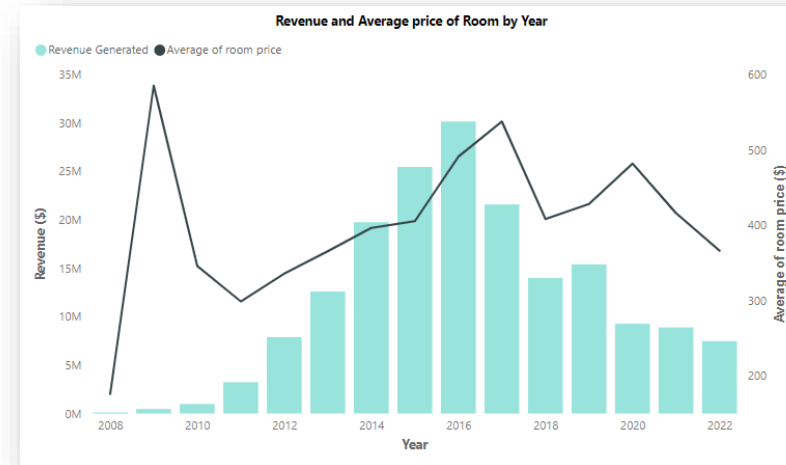
Data Exploration, Processing and Cleaning

➢16 separate .csv files were taken and merged into a single file using Python.

➢Conversion of Unix timestamp to Date-Time format using pandas.

➢Imputation of null values in the dataset using descriptive statistics.

➢String formatting in the price column to remove special characters.

➢Creating buckets for each city that we considered in our analysis
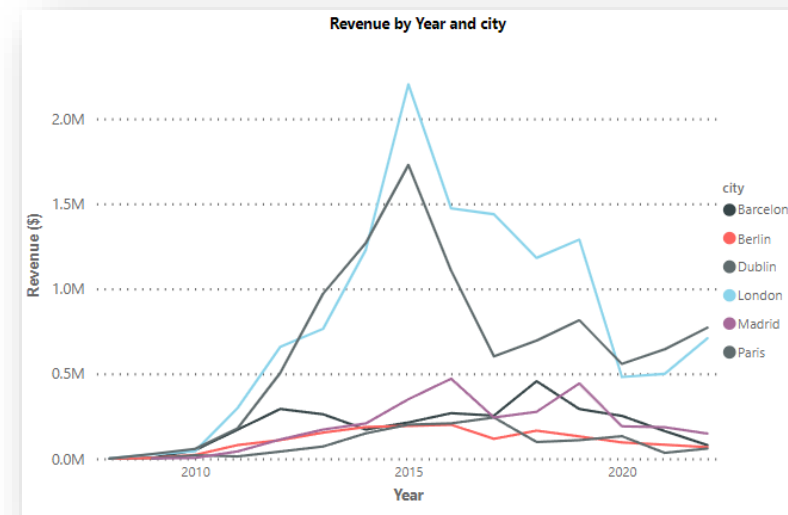
Data Visualization(1)

➢We have used Microsoft Power BI as our data visualization tool.

➢The design theme is minimal.

➢We created four graphs to tell the story of Air BNB's performance in various exciting cities around the world, as well as the key factors influencing it.

➢The types of graphs that we have used are:
- Line and Clustered Column Chart
- Line Chart
- Stacked Column Chart
- Bar Chart Race (Animation)

Data Visualization(2)

➢Does the average room price per year correlate with the revenue generated by Air BNB per year?
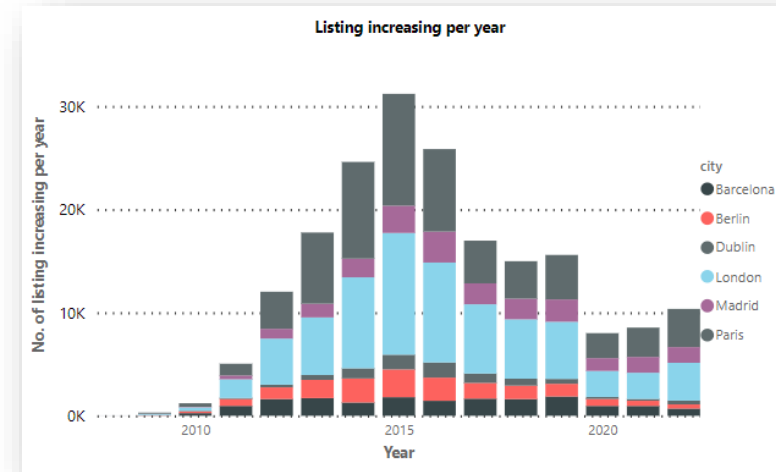

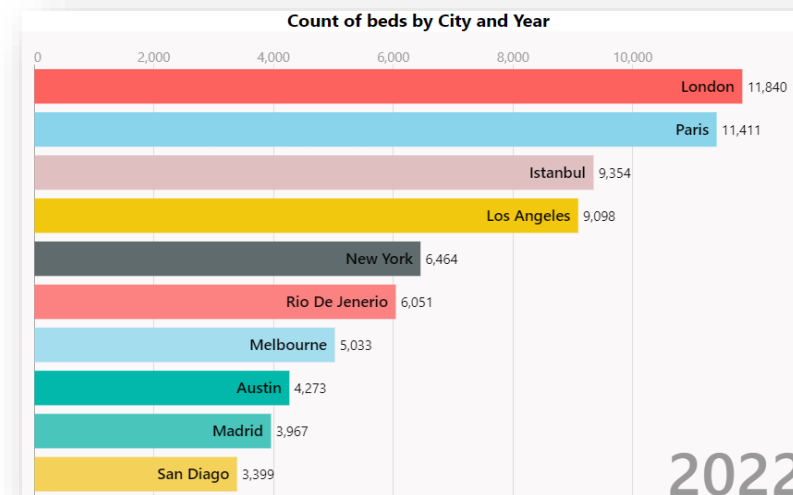➢Covid-19 had jeopardized the hotel booking business, was Air BNB affected as well?

Data Visualization(3)

➤London and Paris contribute to the main listings of Air BNB, but do they also contribute to the revenue generated?

➤Istanbul's heroic run in the race for accommodations played by different cities around the world!

Conclusion & References

➢This data visualization project was pretty interesting due to the process of plotting one graph after another and uncovering fascinating patterns on how one feature influences another.

➢ We have seen the impact of Covid-19 on the organization in the year 2020.

➢ After 2020, we've seen an increase in AirBNB revenue and listings in a number of locations. We anticipate that this trend will continue and that more intriguing data patterns will emerge in the coming years.

➢References:

- Data is gathered from: http://insideairbnb.com/get-the-data.

- We have learned the basics of Microsoft Power BI from: https://app.datacamp.com/learn/courses/introduction-to-power-bi

- From this video we understood how to install the plug-in for Bar Chart Animation in Power BI: https://www.youtube.com/watch?v=tks7FDn6vKs

Thank you