

## Business Problem:

The company operates a diverse fleet of aircraft ranging from small business jets to medium-sized machines. We have been providing high-quality air transportation services to our clients for several years, and our primary focus is to ensure a safe, comfortable, and convenient journey for our passengers. However, we are currently facing challenges due to several factors such as stricter environmental regulations, higher flight taxes, increased interest rates, rising fuel prices, and a tight labor market resulting in increased labor costs. As a result, the company's profitability is under pressure, and they are seeking ways to address this issue. To tackle this challenge, they are looking to conduct an analysis of their database to find ways to increase their occupancy rate, which can help boost the average profit earned per seat.

## Main Challenges:

1. Stricter environmental regulations.
2. Higher flight taxes.
3. Tight labor market resulting in increased labor costs.

## Objectives:

1. Improve pricing strategy.
2. Enhance customer experience.

## Basic Analysis:

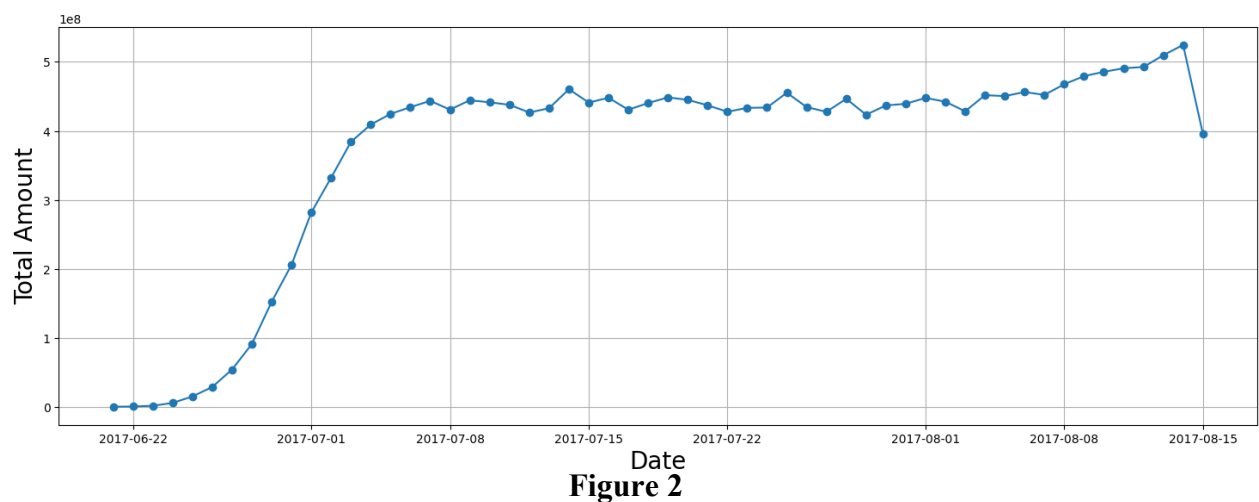
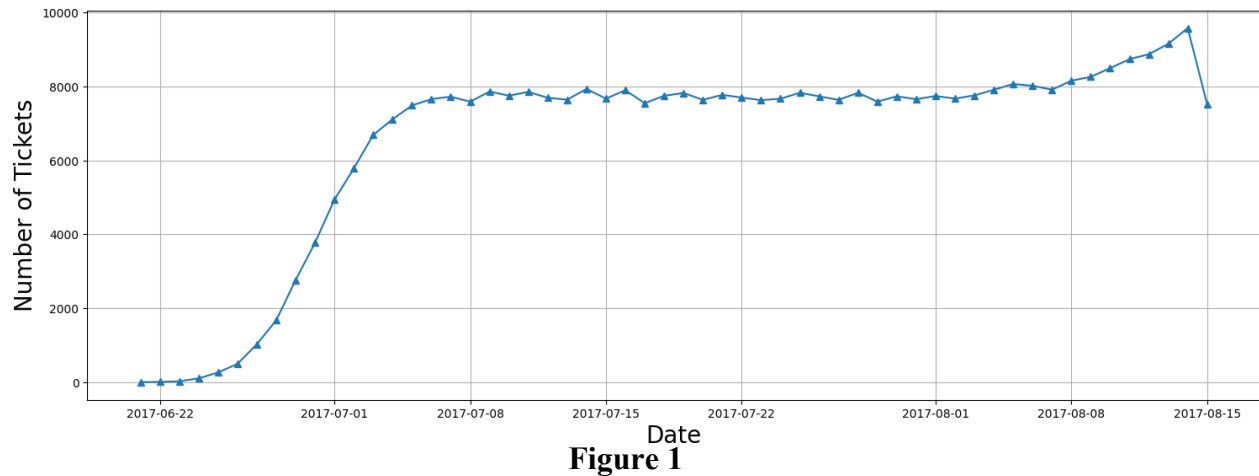
The basic analysis of data provides insights into the number of planes with more than 100 seats, how the number of tickets booked, and total amount earned changed over time, and the average fare for each aircraft with different fare conditions. These findings will be useful in developing strategies to increase occupancy rates and optimize pricing for each aircraft. **Table 1** shows the aircraft with more than 100 seats and the actual count of the seats.

Aircraft code	Number of Seats
319	116
320	140
321	170
733	130
763	222

773	402
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**Table 1**

In order to gain a deeper understanding of the trend of ticket bookings and revenue earned through those bookings, we have utilized a line chart visualization. Upon analysis of the chart, we observe that the number of tickets booked exhibits a gradual increase from June 22nd to July 7th, followed by a relatively stable pattern from July 8th until August, with a noticeable peak in ticket bookings where the highest number of tickets were booked on a single day. It is important to note that the revenue earned by the company from these bookings is closely tied to the number of tickets booked. Therefore, we can see a similar trend in the total revenue earned by the company throughout the analyzed time period. These findings suggest that further exploration of the factors contributing to the peak in ticket bookings may be beneficial for increasing overall revenue and optimizing operational strategies.



We were able to generate a bar graph to graphically compare the data after we completed the computations for the average costs associated with different fare conditions for each aircraft. The graph in Figure 3 shows data for three types of fares: business, economy, and comfort. It is worth mentioning that the comfort class is available on only one aircraft, the 773. The CN1 and CR2 planes, on the other hand, only provide the economy class. When different pricing circumstances

within each aircraft are compared, the charges for business class are consistently greater than those for economy class. This trend may be seen across all planes, regardless of fare conditions.

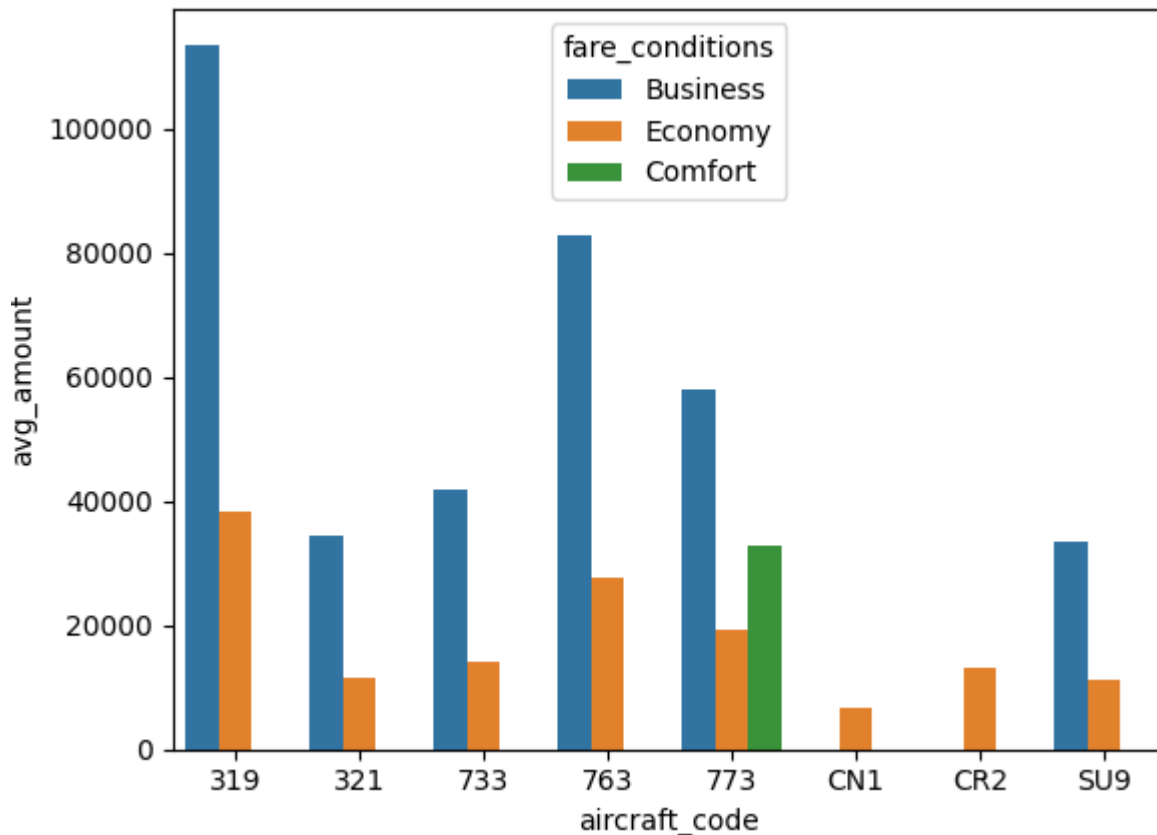


Figure 3

## Conclusion:

To summarize, Airlines can find areas for improvement and modify their pricing and route plans as a result of assessing these indicators. The airline should revise the price for each aircraft as the lower price and high price is also the factor that people are not buying tickets from those aircrafts. They should decide the reasonable price according to the condition and facility of the aircraft and it should not be very low or high. Airlines may achieve long-term success in a highly competitive business by adopting a data-driven strategy to revenue analysis and optimization.