

Due to the recent unfortunate airline crashes and the news and media bombarding the public with reports and figures about airline safety trends to prove air is no longer a safe way to travel. As a data science student, I have visualized the data using six different matrices using tableau software to find airline safety insights.

Let's dig into it. To make findings more readable and understandable to audiences, I have used different colors such as fatalities as red, decreasing fatalities as light red, increasing revenue, and airlines' seats as green). Similarly, to make the presentation more effective, chosen best-fit visual methods based on the available datasets such as bar chart, area chart, treemap, and a bubble chart, and used seven matrices.

Observed Statistics:

- 1) **Total Revenue:** Revenue is the best matrix to see the increasing popularity of air travel. The revenue statistics show revenue is increasing each year; means airlines are making more profit.
- 2) **Available seats:** Due to the increasing popularity and safety measure, more people are traveling through airlines so they are increasing available seats each year.
- 3) **Safety record:** The fatal accidents per 1000000 departures are significantly decreasing, and after 2010 to now, it shows almost 0.
- 4) **Airline fatalities:** The total airline fatalities are decreasing each year. It was only 399 in 2017.
- 5) **Road accidents versus Air:** According to the statistics, road accidents are far more than air accidents. The curve shows road fatalities are consistent around 35 to 40 thousand, while airline fatalities are decreasing each year by around 500.
- 6) **Financial data:** This is another way of measuring the safety and popularity of airlines. Fuel expenses and labor expenses are increasing over the year. It clearly indicates, more people are traveling through airlines, so more fuel is consumed, and more people are hiring by airlines.

Conclusion or findings:

Hence, despite having a few accidents and fatalities, air travel is extremely safe and has been consistently safe due to the following finding.

- 1) Airline revenues are continuously growing.
- 2) Airline fatalities and incidents are far lower than a motor vehicle.
- 3) Airline fatalities decreasing over time.
- 4) Airline departed seats are continuously growing.
- 5) More people are hiring or depending on the airline industry.

References:

- 1) Airline Safety, Aviation Safety Network
- 2) Crash Datasets, <https://data.world/datasets/crash>
- 3) Traffic and Capacity by Operating Region, Airline data project.
- 4) Revenue data (https://www.transtats.bts.gov/Data_Elements.aspx?Data=3)
- 5) US (<https://www.airlines.org/dataset/safety-record-of-u-s-air-carriers/#>)