

Dsc_640 (Executive Summary)

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.

To analyze the safety concerns of airlines, I have used the following data sources.

- 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/#>)

There are so many different parameters and indicators to analyze airlines' safety concerns, but I have used six different matrices to find the uncover findings.

1. Airlines revenue(Domestic, International)
2. Safety records of US carriers
3. Motor vehicle Fatalities
4. Departing seats
5. Aircraft death per year
6. Death comparison between aircraft and motor vehicle

To make findings more readable and understandable to audiences and stakeholders, 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 storytelling more effective, chosen best-fit visual methods based on the available datasets such as bar chart, area chart, treemap, etc. The following are the breakdowns of each chart displayed in summary.

Revenue: It is one of the best ways of looking into its progress. According to the chart, it is increasing each year. It means airlines are making more profit each year.

Departed seats: These bar charts show the departed seats' trends over 2010 to 2019. It is increasing over time; it means more people are traveling through airplane.

Motor-Vehicle fatalities: Here, I have created a treemap to capture the fatalities over time. It seems fatalities are consistent each year, and die more than 35 thousand people each year due to road accidents in the USA.

Safety records of USA carriers: It shows accidents and fatalities of us carriers are decreasing each year. We can see that the accidents and deaths are almost 0 after 2010 to till.

Aircraft fatalities: It seems, aircraft fatalities are getting down each year.

Vehicle verse airplane: Another mostly used transportation media is a vehicle. So I have compared worldwide air fatalities with vehicle fatalities in the USA (2000-2019). Still, vehicle fatalities are a lot more.

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.