

Airline Data Analysis

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Table of Contents

Task.....	3
Summarization.....	3
Ethical Concerns	3

Task

A 250-word paper summarizing what you did and why you made the decisions you did – why did you choose the visualizations you did? How do you plan to present to your internal team? What were your findings? Ethically what do you need to consider? This paper is for the instructor to understand your thought process and justification of design.

Summarization

Since the disappearance of MH370 in 2014 and two Boeing 737 crashes, first in 2018 and second just 5 months later, there has been fear in public and concerns about the air travel safety. However, despite this increased attention we've seen in media reports, these numbers do not really represent any increasing trends. On the contrary, we've seen the opposite trend as airline accidents have continued to decrease over time.

I chose power BI as the tool to create dashboard for DSC 640 project visualizations. I have used color palette from venngage.com and avoided colors as per suggestion. I have used donut chart to compare fatalities between two period 1985-1999 and 2000-2014. Even in a quick glance, donut chart clearly shows fatalities were more during 1985-1999 period. Then the line chart shows that although there were few spikes but overall fatalities have kept on decreasing since 1970. While over all fatalities were declining, air traffic increased more than four folds since 1970, World Air Traffic bar chart shows the same.

Passenger and Revenue line chart shows how these two have shown to grow over the period and air travel has become more and more popular. Hence, this shows that people are getting more reliable on air travel instead of the fear shown in media.

I chose horizontal bar chart for fatalities by each airline as it shows best comparison between two groups for each airline. Another horizontal bar chart shows the sheer volume airlines experienced on a weekly basis. Comparing data from both the Horizontal bar charts, let's say for United Airlines, shows that it has flow over 7 billion Kms in a week and had only 109 fatalities in 15 years (2000-2014).

This clearly shows air transportation is pretty safe.

Ethical Concerns

1. There are some exception scenarios like covid that impact air travel. These scenarios can lead to false conclusions.
2. Some airlines focus more on plane maintenance than others and consequently have less accidents than others, however, the fear is created for over all air travel.