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DSC 640: Week 5 & 6 Dashboard assignment
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Dashboard 2 Write-up

The dashboard created to inform the internal team at Delta airlines about the misinformation surrounding commercial aviation safety was well received. The team wants to present the finding to the senior leaders for an executive review. For the presentation, I could solely focus on Delta's safety performance and compare it with motor vehicle safety to show the leader how reliable Delta's air carriers are. Because based on the analysis, the number of incidents and the fatality rate by Delta has substantially decreased due to strict regulation and technological advancement. However, I will also focus on other major airlines because any negative publicity, especially concerning public safety, toward an airline can tarnish the industry's reputation and negatively impact other commercial airlines, including Delta.

I decided to compare 1985-1999 to the 2000-2014 dataset using a stacked bar chart to evaluate the recent safety performance with past performance for each airline. Since the stacked bar chart showed that the fatality rate has recently decreased in the majority of the airlines, a fatality bubble chart was chosen to determine which airlines have had the most fatalities in recent years. The bubble chart showed that airlines in developing nations have high fatality rates. Therefore, the previously created stacked bar chart was filtered out to only include airlines from the developed nations to emphasize how safe airplanes have become and that frequent airplane crashes are likely from airlines in developing countries with primitive technology. Using the motor vehicle crash dataset, I created a motor vehicle fatality line chart to visualize the upward fatality trend related to driving, with an average of 45,000 deaths per year in the last few decades. A stacked bar chart of airplane and motor vehicle fatality was generated to show a direct comparison to highlight the disparity in yearly fatality between the two. The airfare line chart and air travelers' frequency line chart show the accessibility and affordable nature of air travel which has gained popularity in recent decades. I will close the presentation by listing the economic and social benefits of the commercial aviation industry.

The presentation heavily relies on data visualization to present the truth about air travel safety to aviation leaders; therefore, it is imperative to consider the ethics of data visualization to remain unbiased. Since all the columns were relevant to create visuals, no columns were dropped that could compromise the integrity of the datasets. Additionally, the visuals were created using the cartesian coordinate, and the x and y-axis were not inversed to influence the audience. To avoid exaggeration, the graphs were started at the origin (0,0). Quantitative variables were represented in their proper proportion. For instance, if a column labeled "Death (in thousand) contained values such as 1.5, 2.5, etc., then the values in that column were multiplied by 1000 before plotting for comparison. The findings presented in the presentation are unbiased and transparent as possible.