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DSC 640

Assignment 2.3 Supporting Documentation

In recent years, the media has been widely sharing statistics based upon a few tragic airline crashes as a way to discourage travelers from flying. As a data analyst it is my job to gather data and show the facts to show what is truly happening in the world. As the statement by the media had no backup, it was critical to find data which either corroborated the statement or contradicted it.

The dashboard provided shows seven different visualizations to help answer the question on how safe or unsafe traveling by air is. The two charts in the bottom left show the combined number of incidents for various airlines from 1985 through 2014 as well as the total number from 1985-1999 compared to the number from 2000-2014. The visualizations on the top right and the bottom left are in the same format but are for fatal accidents and fatalities.

The colors I chose for all visualizations were selected in order to accommodate those who may be color blind. I avoided using color combinations such as green and red together, as they can be difficult for people who are color blind. As there are 7 visualizations, I put the most important one in the top left as most people read left to right so it would be the first visualization they see. Additionally, since it is the largest visualization, it would stand out the most. I used bar and line charts to show each visualization as best as possible as other chart types were not as great as a fit for the data sets. By placing a combined and comparison visualization next to each other as opposed to randomly placing them, it allowed for quick comparisons for overall versus the two different time periods. Labels were changed to appropriately correspond with the visualization to make it easier for everyone in the company to understand the data.

The layout of using bar charts for the combined charts allows the viewer to see the impact by airline. The comparison line charts allow the viewer to see that the number of incidents, fatal accidents, and fatalities have decreased overall from 1985-1999 to 2000-2014. These trends show that contrary to the media, safety from traveling by air has actually increased over the years.

The final and main visualization in the top left shows the number of airline and motor vehicle deaths by year from 1914-2016 from additional datasets. As the chart shows, the number of airline deaths is sometimes 10 times as low as the number of motor vehicle deaths for a particular year. It appears that motor vehicles are much less safe compared to airlines based on the number of deaths. This data also agrees with the conclusion from the other data sets that the media is incorrect stating that the air is no longer safe to travel. Based upon the data, it appears that traveling by air is much safer as a mode of transportation than traveling by motor vehicle.

Datasets:

https://github.com/fivethirtyeight/data/blob/master/airline-safety/airline-safety.csv

http://www.baaa-acro.com/statistics/death-rate-per-year?page=0

https://injuryfacts.nsc.org/motor-vehicle/historical-fatality-trends/deaths-and-rates/