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DS 640

Project Task 1: Dashboard

The airline safety data provided by the Aviation Safety Network provides a good overview of the current state of air travel and how safety has improved over the years. The question being asked currently, is traveling by air the safest way to travel? From the initial analysis of this question, I would have to say yes, it is. In my dashboard, I went with the most basic labels for the provided charts as I possibly could. The dataset did not provide good variable labeling. Most of the charts are bar, with a pie & donut as well as a scatterplot. The scatter plot provides the best quick analysis of how many crashes have happened in recent years. However, the two bar charts center provide a good look at how many deaths there have been per the number of people flying.

Looking at Figure 1 attached. The bottom right pie chart shows aviation crashes by year, showing the top five years. From 1942 through 1945, there were a total of 3,191 airline crashes you compare that to the last five years 2015-2020, there were a total of 650 crashes [1]. That is based solely on crashes, not considering the number of possible people flown on any given amount of time.

Take the graphic in the middle center, Airline Seat Hours Flown. Three of the top five airlines have had over 5 billion seats/customers flown in one week's time. Just looking at United Airlines, which had the largest possible seats flown, with just over 7 billion, has only had two crashes since 2000. You can see that the likelihood of not only a crash but one leading to a fatality is extremely unlikely, with a .5495 x -10\*11% (manually calculated).

From the initial analysis, a trend that seems to be showing is the larger airline companies that have flown the most, i.e., had the most seat hours flown, have also had the most considerable amount of fatalities. Since 1985, the United States has had the most fatalities from three of its largest airliners and a total of 7 crashes [2].

Even with seven crashes since 1985, compared to the number of flights and possible passengers flown over that same period, I still feel that air travel is still a safe mode of transportation. According to an article on this same topic, "Air travel resulted in 0.07 deaths for every 1 billion miles traveled compared to 212.57 for motorcycles and 7.28 for cars" [3]. Further analysis of the current pandemic and other modes of transportation could help bring this to better light.

1. Airline Safety. (2020). Github. Retrieved from <https://github.com/fivethirtyeight/data/tree/master/airline-safety>

2. Statistics. (2020). Bureau of Aircraft Accidents Archives. BAAA. Retrieved from <http://www.baaa-acro.com/statistics>

3. Why Air Travel is The Safest Mode of Transportation? (2020). Sheffield School of Aeronautics: Airline Career & Aircraft Dispatcher Certification. Retrieved from <https://www.sheffield.com/air-travel-safest-mode-transportation#:~:text=Pilots%2C%20air%20traffic%20controllers%2C%20and,Aviation%20Association%20is%20no%20slouch.&text=Air%20travel%20resulted%20in%200.07,motorcycles%20and%207.28%20for%20cars>.

Appendix A

Chart

Description automatically generated

Figure 1 Dashboard