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DSC640

Course Project: Milestone 1

06/18/21

## **Process**

### **Airplane Safety**

To make an argument towards airplane safety, I imported airplane and automobile fatality numbers. The automobile numbers were in miles and per 100M population, while the airline numbers were in kilometers and per week. Both of these were therefore converted to 100M population and kilometers. The airplane fatality numbers were worldwide as well, so I needed to import the world population by year for that conversion. The airplane fatality statistics were also grouped from 2000 to 2014, so the automobile fatalities were then summed over that same timeframe to get the ending fatality numbers of 243 for airplanes and 3143 for automobiles.

The fatalities were also compared on another graph by year per 100k population. These numbers have decreased over the years for both automobiles and airplanes, but airplane fatalities per population is several times lower.

A table breaks out the airlines sorted by fatalities per 100M Available Seat Kilometers (ASK). This shows that the top-10 airlines with the highest fatality rate are all outside of the US.

### **Finances**

I looked into the Bureau of Transportation and was able to find net income by year for US carriers. This had a ten year streak of being positive from 2010 through 2019 until the massive losses in 2020 from COVID-19. The Bureau of Transportation also had US carrier fuel costs. This has generally increased since the early 2000s, but is below its peak in 2012.

### **Color**

I decided to use yellow for airplane statistics and orange for automobile statistics. These colors are maintained throughout the dashboard on the line graphs and table grand totals for easy referral. The US airlines net income being green for positive and red for negative I believe is standard for financial data.

## **Sources**

Harro Ranter, Aviation Safety Network. (n.d.). *Aviation Safety Network*. Aviation Safety Network. <https://aviation-safety.net/>

National Highway Traffic Safety Administration. (n.d.). *FARS Encyclopedia*. <https://www-fars.nhtsa.dot.gov/Main/index.aspx>

*Airline Fuel Cost and Consumption (U.S. Carriers - Scheduled)*. (n.d.). Bureau of Transportation Statistics. <https://www.transtats.bts.gov/fuel.asp>

*World Population by Year - Worldometer*. (n.d.). Worldometer. <https://www.worldometers.info/world-population/world-population-by-year/>