Airline Safety Video Presentation Overview

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Data Sets, Tools and Methodology

For this final assignment, I utilized the following datasets which were previously obtained and curated during previous milestones using Python and R:

- Air Accidents by location [1] from the Aviation Safety Network.
- Air transport, passengers carried [2] curated by World Bank.
- Air transport, registered carrier departures worldwide [3] curated by World Bank.
- US Vehicles Miles [4] from the Bureau of Transportation Statistics.
- Transportation Accidents by Mode [5] from the Bureau of Transportation Statistics.
- Safety Statistics [6] from the National Business Aviation Association.
- Accidents and Passenger Miles [7] from the United States Bureau of Transportation Statistics.

The following (1) chart was developed using Tableau:

- Recorded Air Accidents by Travel Phase.
    - Tree Map – Displays total count of accidents by Air Travel Phase for a time period from 1942 to 2019.

The following (5) charts were developed using R:

- Air Travel Fatalities.
    - Bar Chart – Displays the total of count of fatalities by year.
- Aircraft Accident Rates by Flight Type.

    - Box Plots – Displays several box plots for each type of flight type displaying the distribution of Accident and Fatality rates.

- Air Travel Accident and Fatality Distribution.
    - Pie Chart – Two Pie Charts for displaying the Accident and Fatality percentage for Europe, North America, South America, Asia and Africa.
- Total Passengers by Flights – Worldwide est.
    - Bubble Plot –Displays the relationship between total number of passengers over the total of flights from 1990 to 2019.
- Accidents Count over Passenger Miles.
    - Bubble Plot – Contrasts the accident count against travelling passenger miles in the United States.

The following design choices were made:

- Blue color scale to denote the various measures. The grades/tones are distinctive enough and presents no color-blind issues.
- White background with a Blue color palette.
- Utilized the Ipsum theme in R. I replicated the theme options as best as I could in Tableau via manual tinkering.

The following “story beats” where used to create the presentation:

- Introduction.
- Popcorn Analogy.
- Relevant information regarding Flight Phases.

- Accidents by Flight Phase Counts.
- Fatality Counts by Year.
- Aircraft Accident Rates.
- Pie Chart
- Travel Industry Grow Chart
- Accidents against Passenger Mileage Chart.
- Conclusion.

Presentation Methodology

I made this presentation under the assumption that it would be targeted to a general audience. The goal was to use simple language and provide any additional information that could provide context to the visualizations that were created (in this case, flight phases). Had this presentation been targeted to an internal audience, then the additional information regarding flight phases would have not been declared. Some general notes were made to keep me focused on what to say on each slide.

If I had to anything differently, it would've been to use another program other than PowerPoint to create the presentation video. I am an amateur in terms of creating video content so the production values on this video might not be the best.

References:

[1] Airline Safety Network. Airline Safety. Github. Data Set. Added 7 Years ago. Retrieved from https://github.com/fivethirtyeight/data/tree/master/airline-safety.

[2] The World Bank. Air transport, passengers carried. Data Set. Retrieved from https://data.worldbank.org/indicator/IS.AIR.PSGR.

[3] The World Bank. Air transport, registered carrier departures worldwide. Data Set. Retrieved from https://data.worldbank.org/indicator/IS.AIR.DPRT.

[4] Vehicles – U.S. Miles. Bureau of Transportation Statistics. Data Set. Retrieved from https://www.bts.gov/content/us-vehicle-miles.

[5] U.S. Transportation Accidents by Mode. Bureau of Transportation Statistics. Data Set. Retrieved from https://www.bts.gov/content/transportation-accidents-mode .

[6] National Business Aviation Association. Safety Statistics. Data set. Retrieved from https://nbaa.org/aircraft-operations/safety/statistics/.

[7] GitHub Repository. https://github.com/ammalagonc/dsc_640.