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**Course:** DSC640 – T301 Data Presentation & Visualization

**Assignment:** Project Task 4 – Infographic

**Github Repository:** <https://github.com/anfox86/DSC640---Data-Presentation-and-Visualization/tree/main/Projects/Weeks%209%2610>

1. Overall design choices
   1. Used the initial dataset airline-safety.csv (Mehta, 2014)
   2. Used 4 supplemental datasets
   3. Used PowerBI to create a dashboard of new visuals.
   4. Designed with consistent color choices:
      1. Number of aircrafts = purple
      2. Available seats = blue
      3. Number of motor vehicle deaths = red
      4. Accident rate = green
      5. Large number has blue background in powerbi but did something different in the actual infographic
      6. Used paint to create my last visualization
   5. Overall story wanted to show that fatalities by motor vehicles continue to be higher while air travel has less fatalities along with more planes and more passengers. By showing that number of planes and passengers have increased, it points out that air travel is still being utilized by a large population. Also added the statistic at the bottom to show the odds of death by plane crash, so that it was easily seen it’s a very large margin.
2. First visual – Number
   1. For this I felt the bigger impact was to simply show the total number of fatal accidents from 2000-2014. In the grand scheme of things 37 fatal accidents in 14 years is a good key performance indicator.
   2. Created with card in PowerBI, but used a stock image and text in Canva to recreate.
3. Second visual – Bar graph
   1. Used supplemental dataset Air Carrier Inventory (Annual Inventory of Airframe and Aircraft Engines, 2006).
   2. Chose bar graph so I could see the sum of unique serial numbers for each airline. Added legend of operation, that showed whether aircraft was still be used Yes? Or No?
   3. Used shades of purple for data and changed everything else to grey.
   4. Updated axis names and title.
   5. Limited data down to 700 or greater for unique serial numbers

Chart, bar chart

Description automatically generated

1. Third visual – Bar graph
   1. Used the main dataset for this one.
   2. Looked at available seat kilometers flown every week by airline but limited my data down to half a billion.
   3. Used blue as my data color, changed text to grey, and added a line to show average.
   4. Updated axis labels and title.

Chart, bar chart, histogram

Description automatically generated

1. Fourth visual – pie chart
   1. Used dataset U.S. Civil Aviation Accidents, Deaths, and Rates 1997-2018 (Airplane Crashs, n.d.).
   2. Since this had percentages I chose to use a pie chart and made sure each part put together came out to 100%. I haven’t used this visualization in previous tasks, so wanted to use something a little different but still made sense.
   3. Used shades of green for each air carrier type and grey for all text.
   4. Updated title and legend.
   5. Used this to show that the total accident rate per 100,000 hours of flight is very low.

Chart, pie chart

Description automatically generated

1. Fifth visual – visual
   1. Found the data from Odds of dying in plane crash (Ropeik, 2006).
   2. Used a photo that I uploaded into paint and put text over the image.
   3. Used to show how unlikely you are to die in plane crash. I’m a visual person, so until I see it I have a hard time understanding things. I liked using the odds because it’s a different way of measuring something.

A plane flying in the sky

Description automatically generated with low confidence

1. Sixth visual – Line chart
   1. Used dataset that I have included before (Car Crash Deaths and Rates - Injury Facts, n.d.).
   2. Line chart used since it was showing data over time.
   3. Changed it from last time and included the entire timeframe.
   4. Used red for deaths and kept everything else grey.
   5. Updated title and axis names.
   6. Added trend line that showed they have increased over time.

Chart, line chart

Description automatically generated

# References

*Airplane Crashs*. (n.d.). Retrieved from Injury Facts: https://injuryfacts.nsc.org/home-and-community/safety-topics/airplane-crashes/

*Annual Inventory of Airframe and Aircraft Engines*. (2006). Retrieved from Bureau of Transportation Statistics: https://www.transtats.bts.gov/Fields.asp?gnoyr\_VQ=GEH

*Car Crash Deaths and Rates - Injury Facts*. (n.d.). Retrieved from Injury Facts: https://injuryfacts.nsc.org/motor-vehicle/historical-fatality-trends/deaths-and-rates/

Mehta, D. (2014, February 9). *Airline Safety*. Retrieved from GitHub: https://github.com/fivethirtyeight/data/tree/master/airline-safety

Ropeik, D. (2006, September). *How Risky is Flying?* Retrieved from Nova: https://www.pbs.org/wgbh/nova/planecrash/risky.html#:~:text=The%20annual%20risk%20of%20being,is%20about%201%20in%205%2C000