1) Cancelled Flights by Airline in Each State

URL:https://public.tableau.com/profile/ryan.reardon#!/vizhome/NumberofCancelledFlightsbyDayofWeekforeachAirlinein2015/Sheet2

Insight: This map charts shows the cancelled flights by state. Texas has the most cancelled flights at 668; however, when broken down by airline, American Eagle 184, American 168 and Atlantic Southeast 138 make up the majority. American Samoa and Guam have the least cancellations at 0 and West Virginia shows the least in the lower 48 at 3 from airline Atlantic Southeast.

Design of Insight: The dashboard is designed to filter by state on the map chart or by the state dropdown filter. When filtering bubble chart gives the airline breakdown by state. I used the color-blind palette on bubble chart and a orange hue for the map chart.

2) State by State Average Weather Delay

URL:https://public.tableau.com/profile/ryan.reardon#!/vizhome/AverageWeatherDelaysbystatethroughtheYear/Dashboard1

Insight: Looking at the map chart Wyoming has the longest average weather delay at 14.11 When examining it by month on the line chart the average weather delay spiked in the winter months particularly in January at 64.25 and December at 12.17. Oregon has the shortest average weather delay 1.26, when looking at it by month September had the highest month at 3.929; May, August, and September were the lowest at 0.00.

Design of Insight: The dashboard is designed to filter by map chart or the user can filter by the state dropdown filter. The color used is a standard blue tone for color blindness and titles for individual charts and floated the filters to place them in dashboard title.

3) Airline Distance to Air Time Comparison

URL:https://public.tableau.com/profile/ryan.reardon#!/vizhome/AirlineAirTimebyState/Dashboard1

Insight: Comparing distance to air time by all airlines shows strong positive relationship as distance increases, so does air time and correlation coefficients for all airlines are all over .9 very close to 1. Also, a low p value .0001 indicates the null hypothesis (no relationship between variables) can be rejected. The air time distribution and distance distributions are both right skewed, or positively skewed. For distance, the bin average 10,183.85 and bin median at 3,506 and for air time distribution the bin average 9,634.75 and bin median 1,771.

Looking at data by airline, Southwest covered the most distance 43,873,973 and spent the most time in the air 6,012,415. The air time distribution and distance distributions are right skewed indicating the bin averages are higher than the bin medians. Distance: average 4,245.50; median 2,030.00. Air Time: average 4,174.14; median 2,156.00. The scatter plot shows a strong positive relationship with correlation coefficient .95 between distance and air time.

Hawaiian covered the least distance 2,283,162 and spent the least time in the air 306,393. The distance distribution has a bin average 509.29 and median 222, while the air time bin average is 169.33 and median 5. The histograms have two large outliers on both distributions causing the histogram to look bimodal, where seems as though it should be right skewed, and the flights tend to cluster in small groups on scatter plot, but it does show a strong positive relationship with correlation coefficient .98 between distance and air time.

Design of Insight: The dashboard is designed to filter by the stacked bar chart of distance and air time by airline or the user can filter by the AIRLINE drop down. I decided to use blue, orange and the color-blind palette for color choices. I used titles for individual charts and added average and median measurements to the histograms and correlation coefficients to the scatterplot.