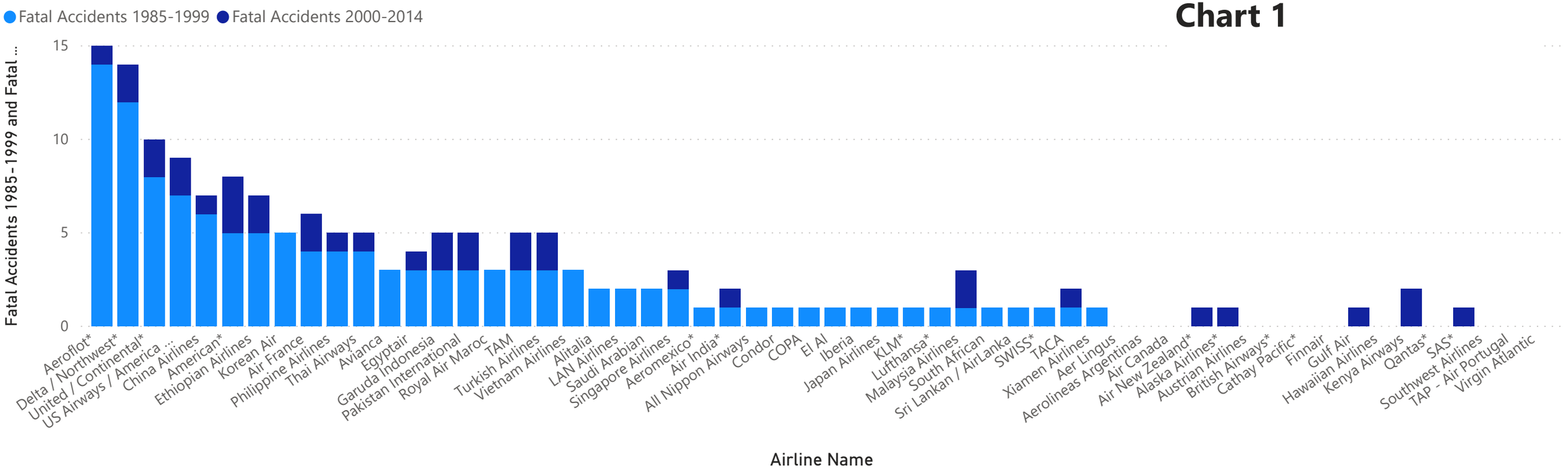
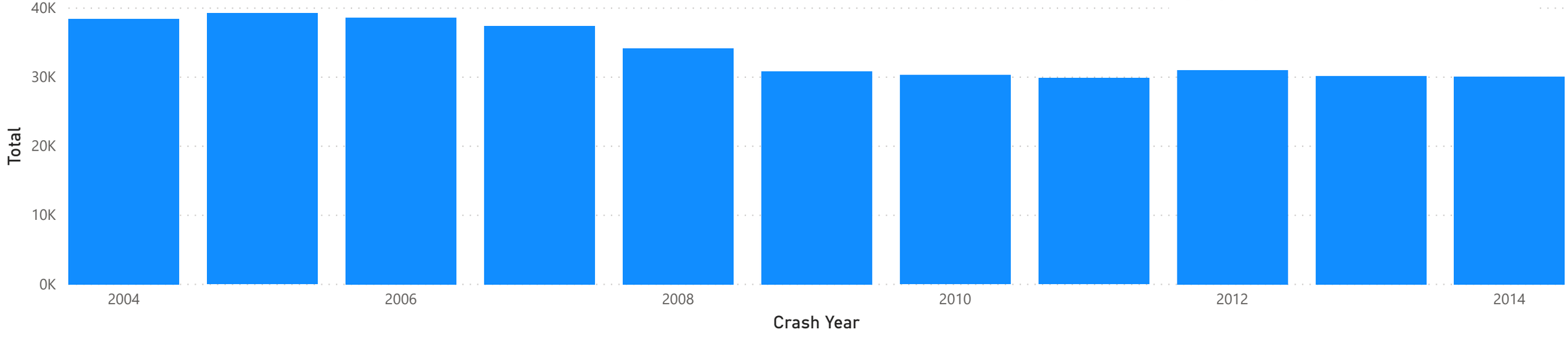
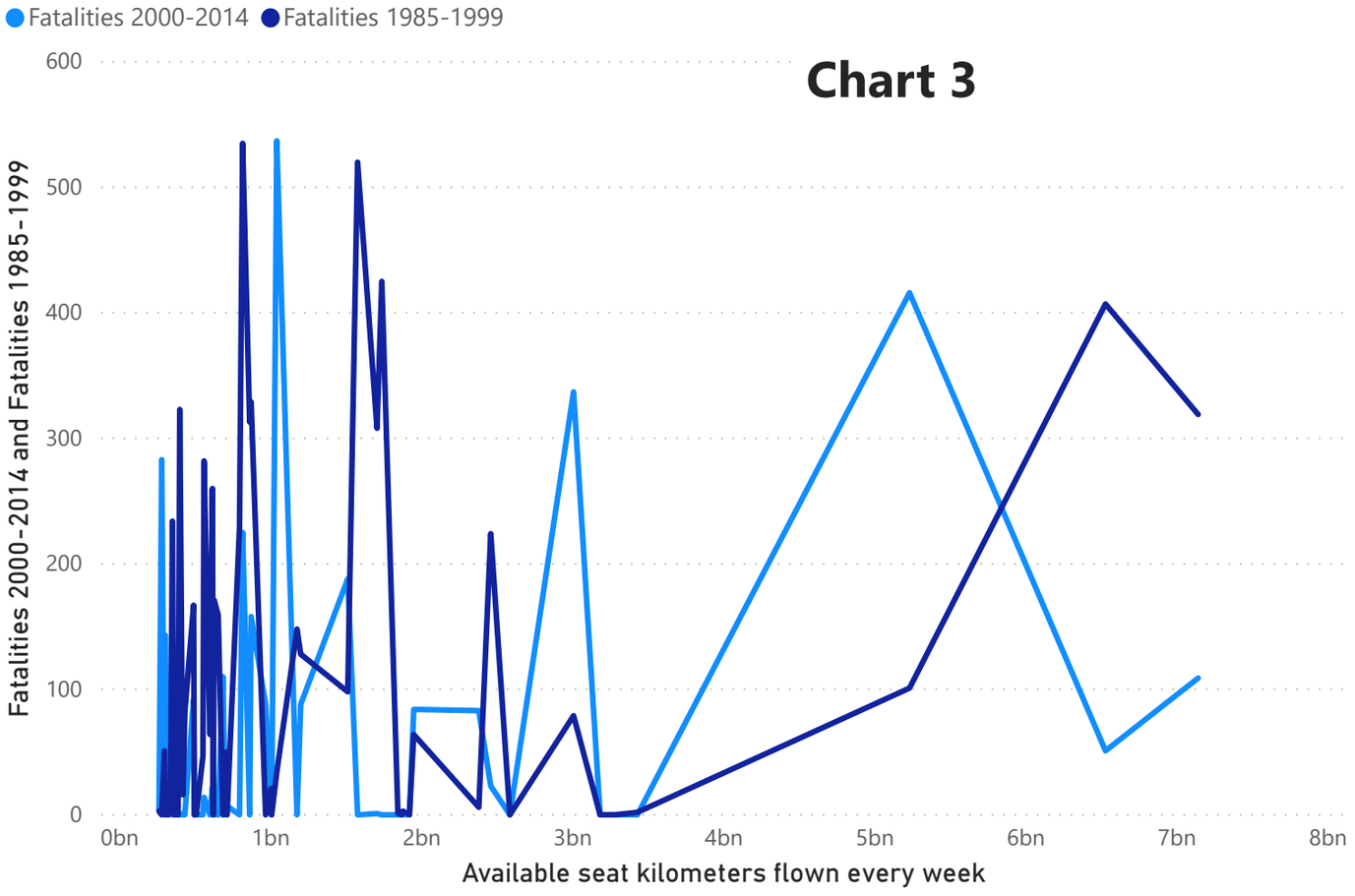
Fatal Accidents 1985-2014



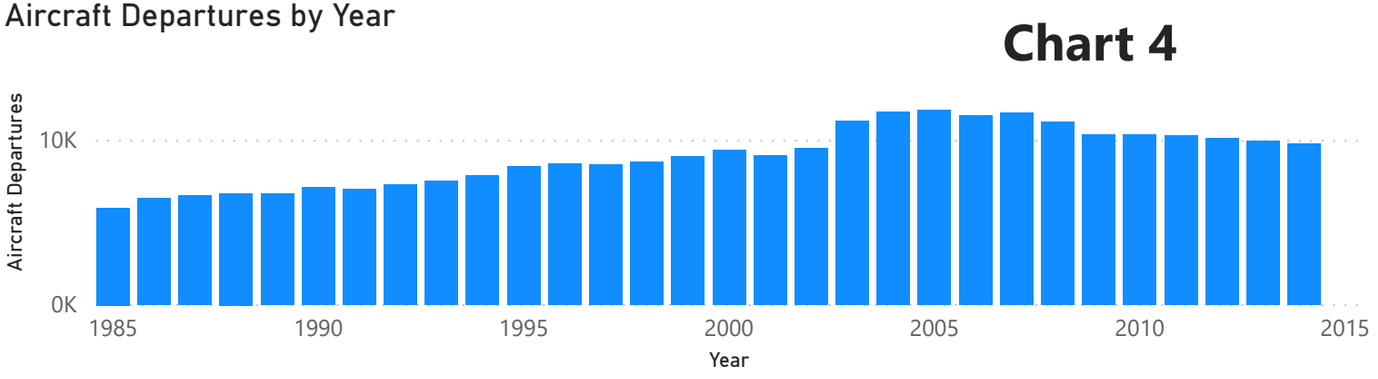
Fatal Vehicle Crashes 2004-2014



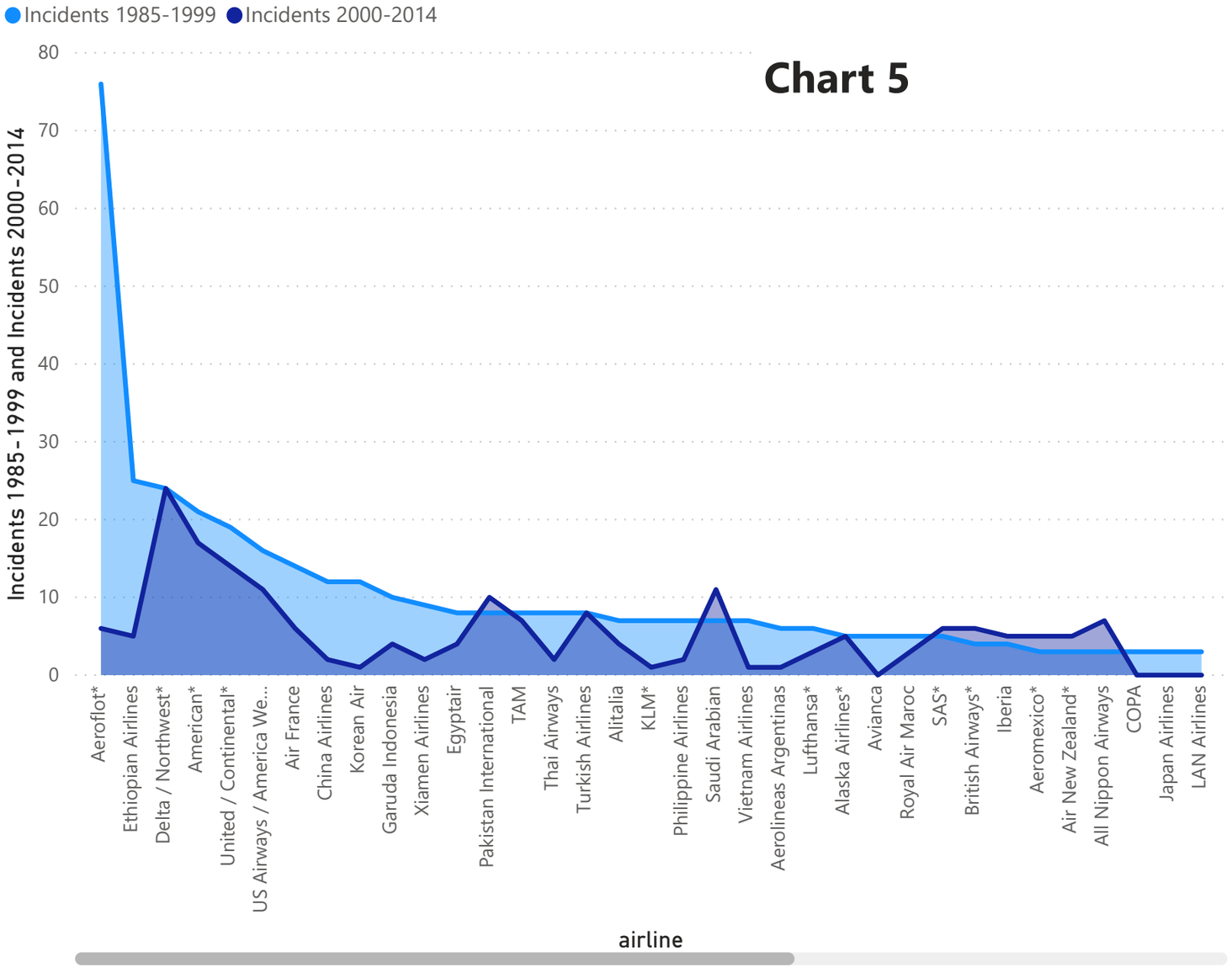
Fatalities 2000-2014 and Fatalities 1985-1999 by Available seat kilometers flown every week



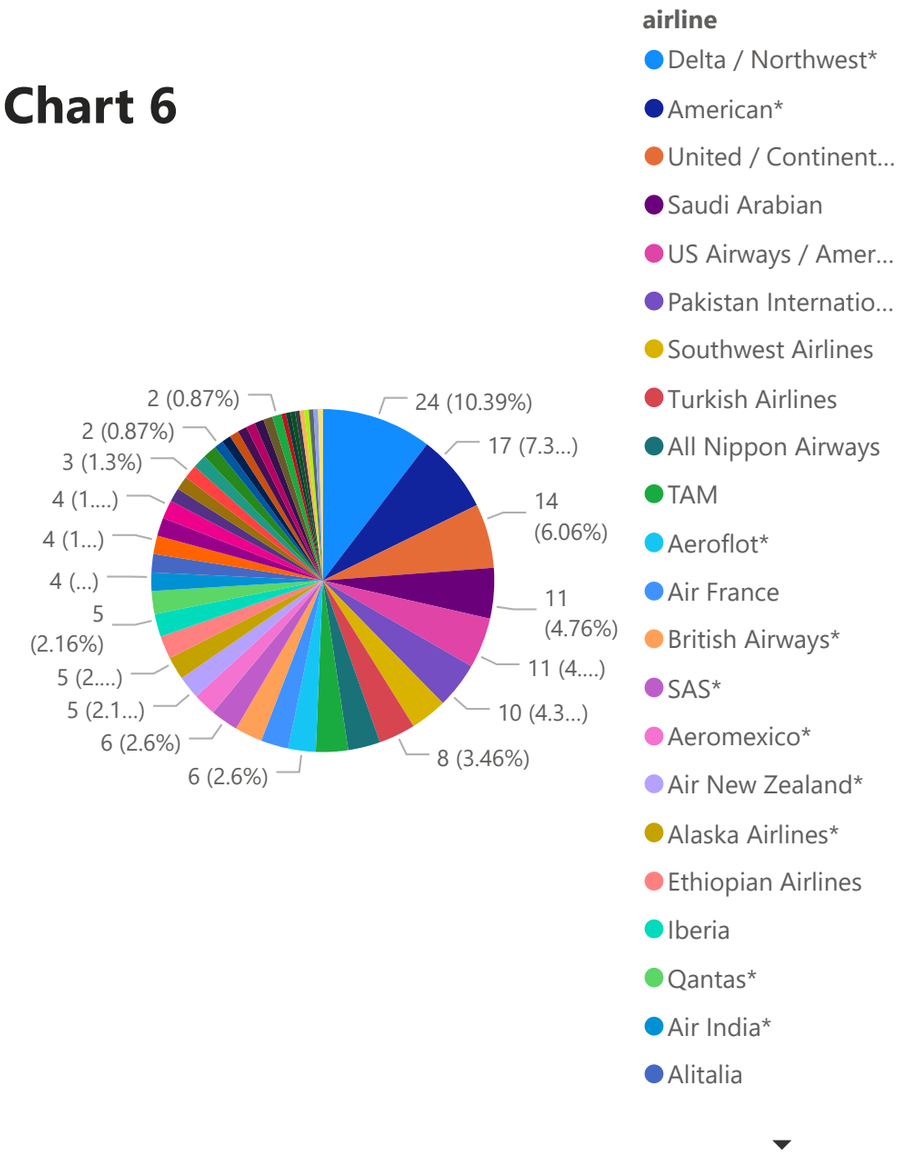
Aircraft Departures by Year



Incidents 1985-1999 and Incidents 2000-2014 by airline



Incidents 2000-2014 by airline



DSC 640 Weeks 3&$ Assignment: Dashboard

Summary

I produced six visualizations to begin our understanding of the current airline safety trends. Our airline safety data ranges from 1985 through 2014, with two buckets of data separating 1985-1999 and 2000-2014. We are able to gain some insight by looking at our data alone, as well as by looking at some related outside data sources.

Chart 1 is a stacked column chart displaying fatal accidents by airline for each of our year-range buckets. We can quickly see that in general our earlier bucket comprises the majority of the chart, suggesting that the number of fatal accidents per airline has generally decreased within the later bucket of years.
Chart 2 uses an outside data resource which tells us the number of fata *vehicle* crashes. Our time frame for comparison is nearly identical to our later year-range bucket, ranging from 2004 through 2014. We immediately see that the numbers for vehicle crashes are greatly increased as compared to that of airline fatal accidents. [https://cdan.dot.gov/query]
Chart 3 displays the number of fatalities for both year-range buckets as related to the number of available seat kilometers flown every week. This gives us a different perspective of the fatalities. This metric measures passenger carrying capacity, and is equal to the number of seats available multiplied by the number of miles or kilometers flown. We should hope to see that airlines with a greater ASK would have a lower accident rate as they tend to carry a greater number of passengers.
Chart 4 comes from an outside resource and tells us simply the number of aircraft departures per year. We can see that the number of departures trends up steadily until about 2007, at which point it declines at a less rapid rate continuing until 2014. This suggests a decrease in customers flying overall but would require more research to understand other potential reasoning.
[https://www.airlines.org/dataset/annual-results-u-s-airlines-2/]
Chart 5 shows us number of general incidents by airline for our two year-range buckets. The numbers for our first bucket as compared to our second bucket are noticeably higher, showing definitively that those numbers have declined greatly in recent years.
Finally, Chart 6 is simply an easy way to see which of our studied airlines is comprising how much of the total number of incidents within our later date range of 2000-2014. This chart is best for top-line visualization but will require further information. For example, Delta may lead in number of incidents but this is likely attributed to the airline's higher overall activity during these years as compared to other airlines.