In light of recent events, our team has prepared this executive summary to give a little more context to the trends and observations that have been noticed from the Airline safety vs Automobile safety analysis. Piggybacking off of the original Airline safety analysis, this summary aims to explain things from a more numbers oriented perspective, as opposed to our more visual inclined analysis. We have explored multiple metrics that tell a story supporting our stance of Airline safety still being the safer route to take.

Dashboard of Metrics Further Explored

Analyzing Airline Accident Numbers from 85-99

Incidents 85 99	402
Fatal Accidents 85 99	122
Fatalities 85 99	6,295

Car Crashes and Injuries

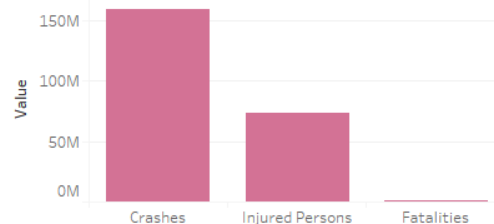|	
Crashes	159,330,832
Injured Persons	73,599,823

Measure Names
- Fatalities
- Fatalities 85 99
- Fatalities 00 14

Analyzing Airline Accident Numbers from 00-14

Incidents 00 14	231
Fatal Accidents 00 14	37
Fatalities 00 14	3,109

Illustration of Crashes in Comparison to Injured Persons and Fatalities

Analyzing Car Crash Data

Crashes	159,330,832
Injured Persons	73,599,823
Fatalities	1,302,530

Automobile vs Airline Fatality Analysis
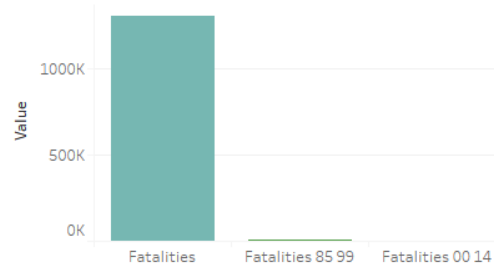
The first metric we explored in the PowerPoint, shows the number of Car crashes, Injured Persons, and Fatalities from the Car Crash dataset. We then took these numbers and performed some basic computations:

Crashes (C) = 159,330,832

Injured Persons (I) = 73,599,823

Fatalities (F) =1,302,530

Created by Osmond C. Oke

Injured Persons Per Crash = I/F = 0.46

Fatalities per Crash = F/C = 0.008

Now although the rate of fatalities to crashes was not so high, a record of 159 million accidents, 73 million injuries, and 1.3 million fatalities is not something to write home about.

The second metric is a graphical representation of the first metric, using vertical bar charts for a more visual comparison.

Illustration of Crashes in Comparison to Injured Persons and Fatalities
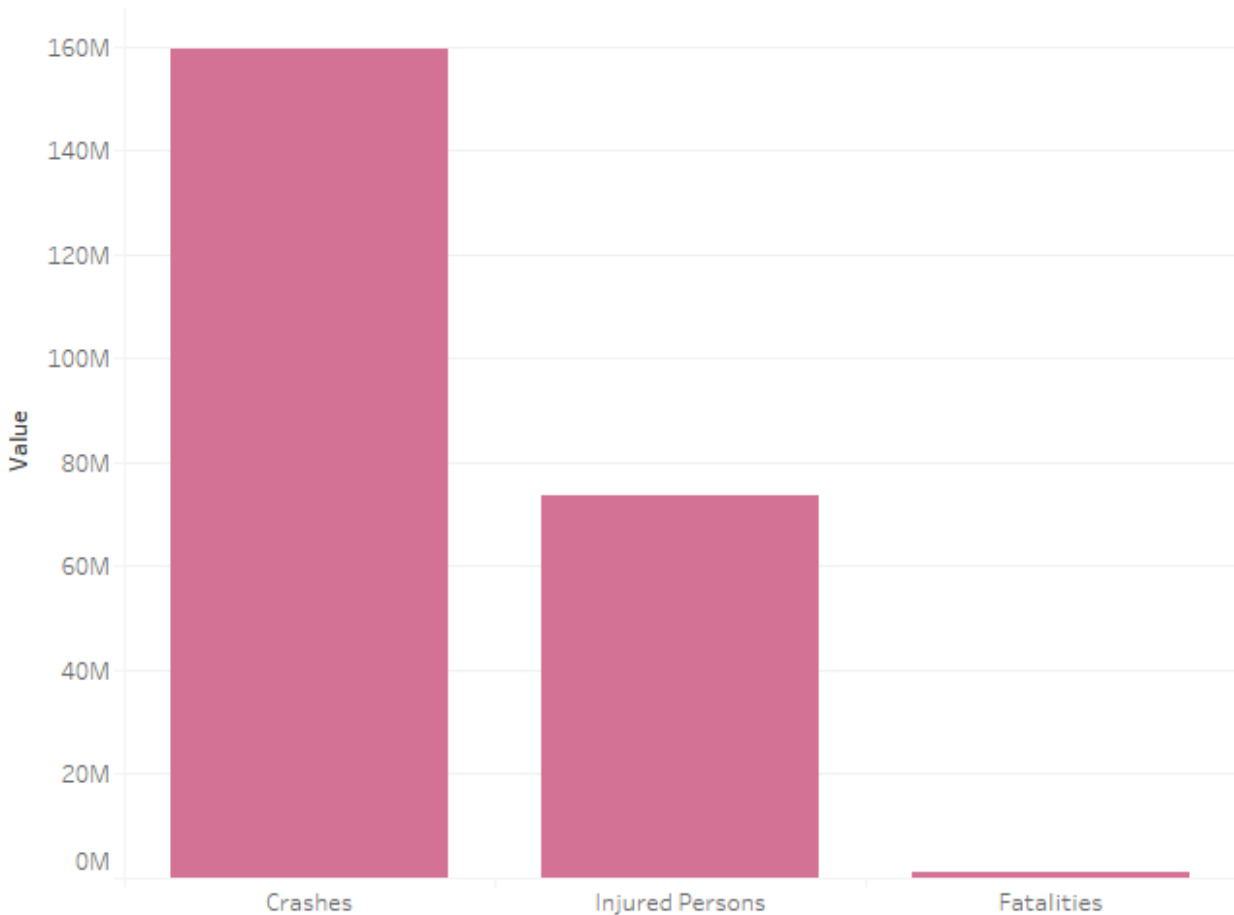
Crashes, Injured Persons and Fatalities.

The use of bar charts, starting from zero, allows for the accurate comparison of values; in comparison to the injured persons and crashes, the fatalities might seem insignificant, even though there were 1.3 million reported incidents. This is why with visualizations, the most important part is the context that sheds some light on the graphic.

Created by Osmond C. Oke

The next metric explored the number of Incidents, Fatal accidents, and the Fatalities for year group from 85-99. We decided to explore the same metric for the 00-14 year group as well, to see if there were any notable changes.

Analyzing Airline Accident Numbers from 85-99

Incidents 85 99	402
Fatal Accidents 85 99	122
Fatalities 85 99	6,295

Incidents 85 99, Fatal Accidents 85 99 and Fatalities 85 99.

Analyzing Airline Accident Numbers from 00-14

Incidents 00 14	231
Fatal Accidents 00 14	37
Fatalities 00 14	3,109

Incidents 00 14, Fatal Accidents 00 14 and Fatalities 00 14.

We then decided to compare the Fatalities in both group against the Auto accident Fatalities.
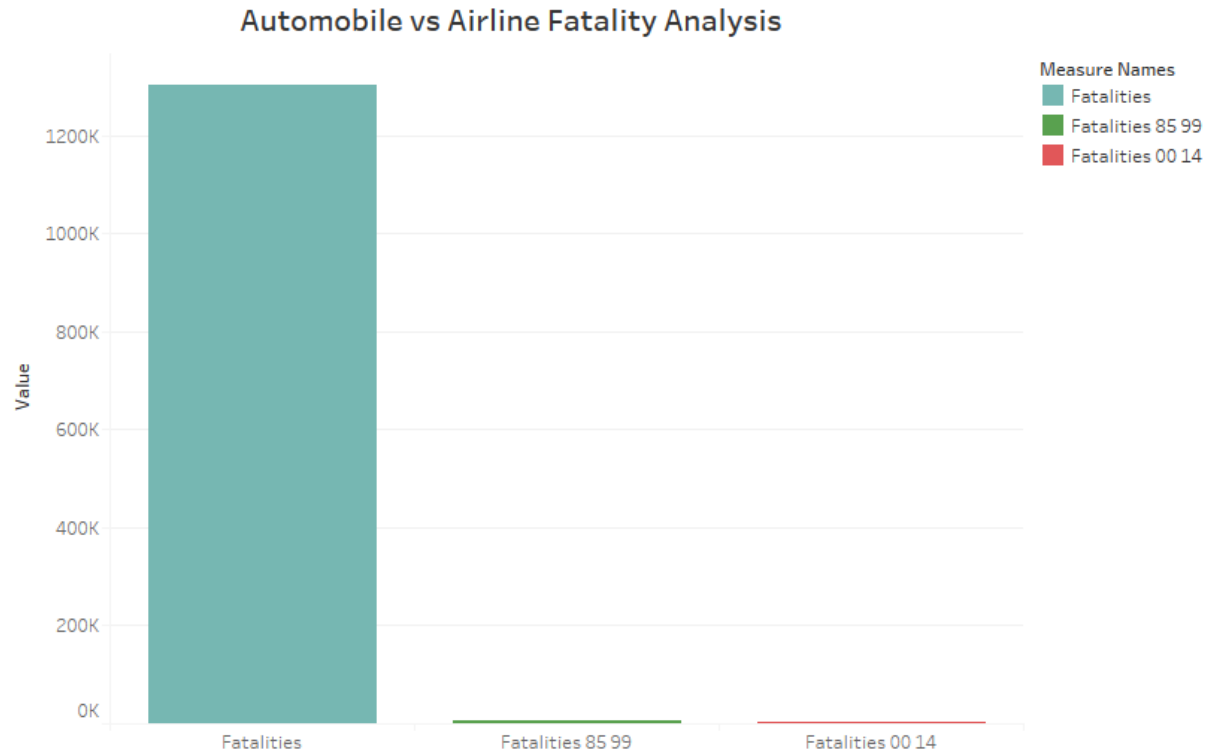
Comparing Fatalities in Automobiles against Airlines

Fatalities	1,302,530
Fatalities 85 99	6,295
Fatalities 00 14	3,109

Fatalities, Fatalities 85 99 and Fatalities 00 14.

From here we decided a visualization would be appropriate to put things in perspective.

Created by Osmond C. Oke

Automobile vs Airline Fatality Analysis

Fatalities, Fatalities 85 99 and Fatalities 00 14. Color shows details about Fatalities, Fatalities 85 99 and Fatalities 00 14.

It can be seen that the automobile fatalities trumped both year groups of airline fatalities by astronomical proportions. If we refer back to the previously stated statement regarding context in visualizing data, we can see that even with context, the airlines had a lot less fatalities than the auto accidents did.

Something important to note from Metrics 3 and 4 is that there is an observed fall in the number of Incidents, Fatal Accidents and Fatalities, from the 85-99 Year group to the 00-14 Year Group, which can be interpreted as an improvement in flying safety conditions, and in turn debunking the claims made by the media.

References

Airline Safety Dataset, Aviation Safety Network

Monroe County Crash Data_2003 to 2015 ,Data Catalog, Data.Gov

Created by Osmond C. Oke