

## **Airline Safety – Project Task 1**

As a part of Project Task 1, the Dashboard created for the Airline safety analysis has 6 different views. As we look at the different aspects of the data from Airline accidents / fatalities and comparative Motor vehicle accidents / fatalities datasets, we can get an idea that Airline travel is relatively much safer as compared to the other mode of transport – ground transport / motor vehicle travel in this case. We get into the details in the further discussion.

Firstly, the summarized information around Airlines incidents and fatalities, we can see that there were 402 incidents between 1985 to 1999 and 231 incidents between 2000 to 2014, which combine to 633 incidents. As compared to Motor Vehicle crashes by year, there were more than 30,000 crashes in the year 2014 (latest) itself – which is way higher than Airline incidents. This is our first clue from safety comparison standpoint. Additionally, we can see that in terms of number of fatalities, there were 6295 fatalities between 1985 and 1999 whereas there were 3109 fatalities between 2000 and 2014 which gives combined total of 9404 fatalities. As against this, the Motor vehicle fatalities in the year 2014 (latest) alone were 32744. This gives us another supporting view about relative safety of Airline travel. The only concern someone would point out is that fatalities per incident is higher in case of airplane travel since airplane carries hundreds of passengers at the same time, whereas motor vehicles would generally carry below 10 people at a time.

Next looking at the number of fatal accidents with respect to Airlines, 122 such accidents between 1985 to 1999 and 37 between 2000 and 2014 which total up to 159 out of 633 of total incidents which is relatively small number as well.

I have chosen Bar plots for the comparison purposes for the majority of the graphs since it gives a good relative measure between various features considerations like fatalities, incidents (Airplane travel), crashes and deaths (motor vehicle travel) and easy to understand for all sections of audience. A Tree map is also included to compare between variety of Airlines on how they perform on fatalities aspect and how they stack against each other. The overall comparison on the above mentioned parameters does lead us to the suggestion that Airline travel is indeed safer.

### References:

- 1) <https://github.com/fivethirtyeight/data/tree/master/airline-safety>
- 2) <https://www.iihs.org/topics/fatality-statistics/detail/yearly-snapshot#yearly-snapshot> (Used the data from first table in Trends section, for the years 1985 through 2014 for easier comparison)