**Airlines safe to travel or not?**

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**Abstract:**

Identify if airlines are still a safe travel option, do a data-based analysis to answer this question and compare the incidents, fatal accidents and fatalities of air travel Vs Motor vehicle road travel.

**Into/Background:**

Due to recent unfortunate airline crashes, the media has been promoting statistics stating air is no longer a safe way to travel. The news and media outlets have been bombarding the public with reports and figures about the trends of airline safety and that things are not looking good. What was previously thought as the safest way to travel, especially when compared to automobiles, is now being presented as one of the most dangerous to the public. But are any of these claims based on facts?

**Choosing the data:**

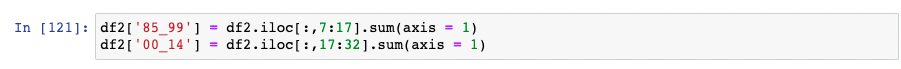
The data of airlines are from (fivethirtyeight, n.d.).

And supplemental dataset for motor vehicle is from (motor-vehicle-safety-data, n.d.)

**Data Wrangling:**

**Motor Vehicle Data:**

The motor vehicle data was available per year, so we had to sum it up into two groups, year 1985 to 1999 and year 2000 to 2014.



Then we had to convert the data into per one trillion kilometers

Graphical user interface, application

Description automatically generated

**Airlines Data:**

The data of the airlines were available in avail\_seat\_km\_per\_week, so we converted that to trillion available seat kilometers.



Then we converted the incidents, fatal accidents and fatalities numbers to per trillion available seat kilometers

A picture containing calendar

Description automatically generated

For the full Jupyter notebook with all detailed data wrangling steps please refer to (GitTInto, n.d.)

**Results:**

The full data viz created in tableau have been saved as pdf in (GitTInto\_Dashboard, n.d.)

From the graphs we can see that

* **180 Airplane Fatalities VS ~15K Car Fatalities per One Trillion Kilometers -In years 1985 to 1999.**
* **306 Airplane Fatalities VS ~11K Car Fatalities per One Trillion Kilometers - In years 2000 to 2014.**
* **180 Airplane Fatal Accidents Vs ~2.2 MM Car Fatal Accidents per One Trillion Kilometers - In years 1985 to 1999**
* **62 Airplane Fatal Accidents Vs ~1.7 MM Car Fatal Accidents per One Trillion Kilometers - In years 2000 to 2014.**

Chart, bar chart

Description automatically generated

Chart, scatter chart

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**Conclusion:**

From the above analysis we can conclude that airlines are still very much safer than road travel. Both the data of air travel vs motor travel from periods 1985 to 1999 and 2000 to 2014 confirms this fact.

**Acknowledgements:**

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**References:**

*fivethirtyeight*. (n.d.). Retrieved from https://github.com/fivethirtyeight/data/tree/master/airline-safety

*GitTInto*. (n.d.). Retrieved from https://github.com/GitTInto/DataPresentationAndVisulization/blob/main/week3\_4/fivethirtyeight/airline-safety/data\_wrangling\_cleaning.ipynb

*GitTInto\_Dashboard*. (n.d.). Retrieved from https://github.com/GitTInto/DataPresentationAndVisulization/blob/main/week3\_4/fivethirtyeight/airline-safety/2.3%20Project%20Task%20-%20DashBoard%20Airline%20Saftey.pdf

*motor-vehicle-safety-data*. (n.d.). Retrieved from https://www.bts.gov/content/motor-vehicle-safety-data.