Have a Safe Travel!

Introduction:

Are you a frequent traveler? Airline have made so easy to travel anywhere in the world. it is transforming the dreams into reality and making sure we use our time efficiently. So, if you are a passionate traveler and want to explore the new destination, Airline is the best option for these days.
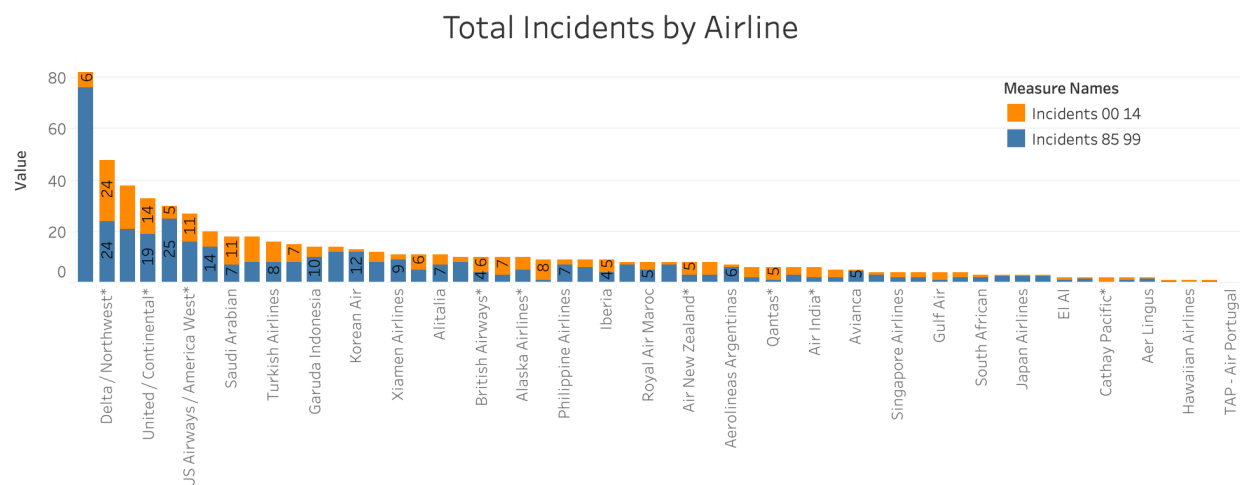
We are a part of digital world and news travel way faster than airlines. the news that are bombarding these days is about Airline Safety. Which raise a question for us How safe is air

travel really? All the news that are coming regarding Airline incidents and fatalities have created a multiple doubt and the passenger are in state of panic. Is Air Travel safe. What measures airline taking to make sure of passenger safety? Are they taking any steps to guarantee safe air travel?

So, friends tighten your seat belts and let's take a flight using statistical approach to find out the truth and to get answers by looking into the Airline incidents and fatalities data for the period between 1985 to 2014.
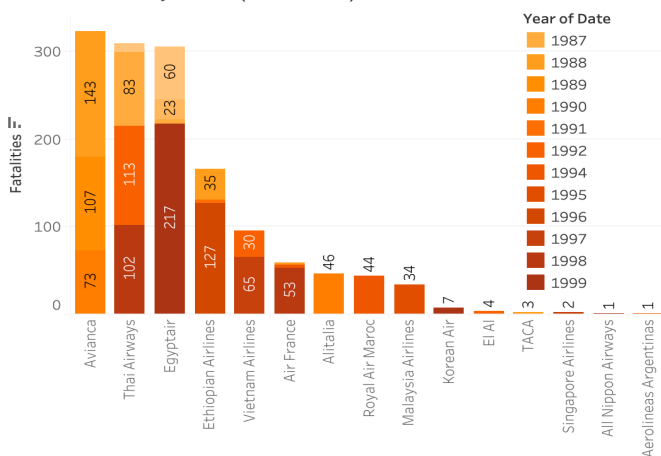
Uncovering the truth

To serve the Air travel demands of travelers, we see so many Airlines. How these airline work and what is the fatalities and incident rate for every Airline? Let's study the data to understand which Airline has most incidents and fatalities compare to others Airline.
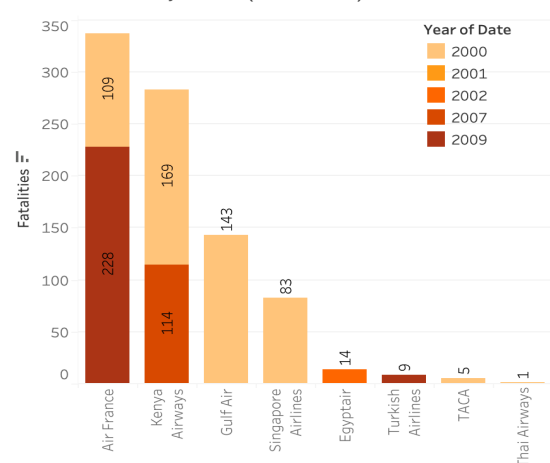
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Total Incidents by Airline

Visualization show Aeroflot and Delta/Northwest Airline has most incidents while Japan Airline and Aer Lingus Airline ensures more safety. Although if we see closely with technology progress the incident rate is getting lower in period 2000 – 2014 compared to years between 1985 – 1999. As Aeroflot Airline reports 76 incidents in year between 1985-1999 and 6 incidents in years between 2000-2014 which indicate incident rate get lower by 90% for Aeroflot Airline.

Total Fatalities by Airline(1985-1999)
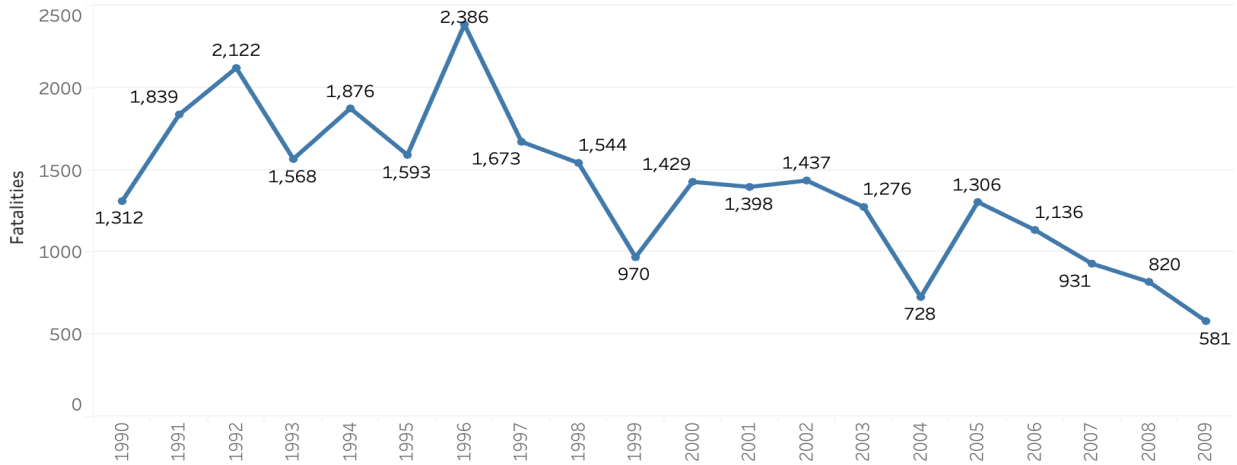

Total Fatalities by Airline(2000-2009)

Another visualization to study the fatalities rates by Airline. We can clearly see Airlines like Singapore Airline; Thai Airways ensure more safety to passengers whereas Air France and Avianca Airlines have highest number of fatalities during 1985-2014.

Based on the visualization facts the passengers can choose their Airline and they can prioritize their well being
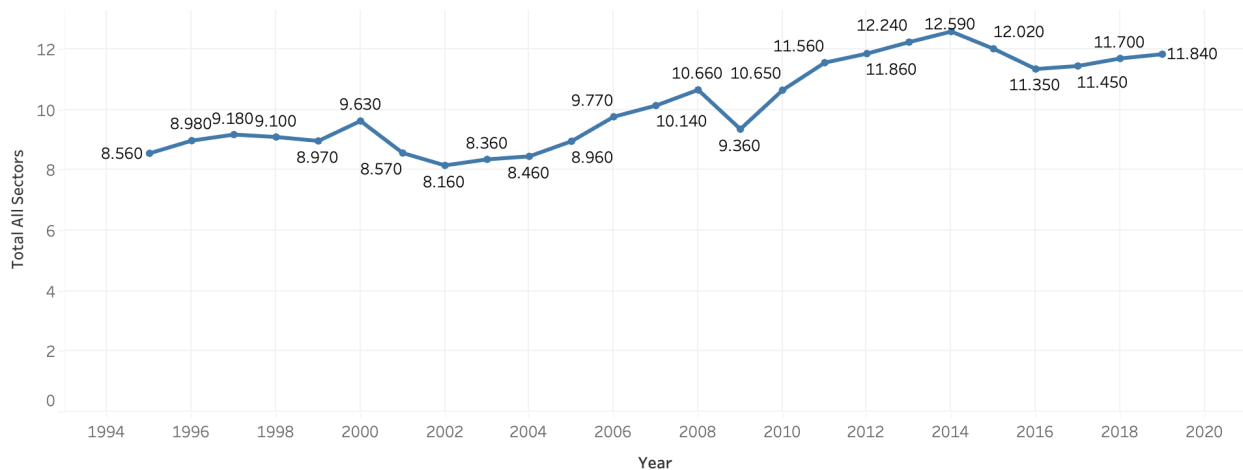
Last 20 Year Fatalities Rate

Total Fatalities for last 20 Year

Historical data above reveals that the fatalities rate was higher in year 1996 with total of 1386 fatalities but the visualization show the decline in fatalities rate since then. The fatalities rate went down to 44% in year 2009. This visualization ensure that the Airlines are prioritizing passenger and crew safety. With advanced technology and safety measures this numbers will keep decreasing and this shows the efforts Airlines are making to enhance air travel safety. This information gives peace of mind to all passengers that Airlines are constantly working on to maintained and improved the Air travel safety for passengers and crews.

Airline Revenue by year

Despite of negative news by media on fatalities, the Airline revenue is increasing year over year as we can see in above visualization.

It also suggests that air travelling is happening which indicates positive increase in Air travelers meaning more people is using Airline services.

The revenue increase rate is 38% from 1994 to 2020 indicating Airline are adapting safety measure to promise security and safety to passengers.

Can we say – Air travel is Safe?

I think looking at all the above visualization, it is safe to say that Airlines are making progress although fatalities and incidents are still happening, but we notice a decline in fatalities rates over the years which show Airline industry is continuously working to improve their services and to ensure the safety of the passengers. Also, there are many Airlines available which offers more security and shows very less or no incidents and

fatalities. Also, some of the statistics suggest the revenue of Airline industry is increasing year over year. With profits Airlines can arrange proper training and guidance for flight crew and can work on more safety procedure to improve Airline performance.

Disclaimer

It's important to note that this blog is created as part of school project and all the Airline Safety analysis is performed using Aviation Safety Network database along with airplane crashes and Airline Revenue data from Kaggle.

There is a risk to ensure data accuracy as both data set is obtained from public website and none of them is government website, so it is difficult to say if data is accurate. Also, All the data used for visualization is decade old. Hence this study is limited based on general understanding and knowledge.

References:

- Airline Safety dataset - https://aviation-safety.net/

- Airplane Crashes Since 1908:

  https://www.kaggle.com/datasets/saurograndi/airplane- crashes-since-1908