

DSC 640 Blog

Friday, October 9, 2020

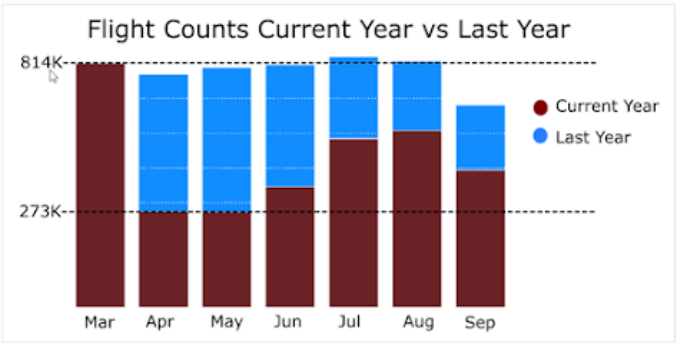
How Fictious Airways improved air travel safety for everyone like super heroes

Air travel is one of the fastest ways to travel far distances over land and over sea. It allows us to visit long distance family, travel far and wide for unique one of a kind business opportunities and or reach dream locations for vacation spots away from one's stress filled realities.



Image Source

However, travel by air has become a growing concern for all types of travelers. In the past, there would be a steady number of flights every month and every year - especially over the holidays. Travelers have become more worried about travel by air more than ever. The cause for this worry is due to a growing number of reports that have recently highlighted the large amounts of plane crashes and the related higher fatality counts versus survival counts over time.



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This concern has impacted the airline industry directly as it is reflective on the number of world wide flights in just a few months. This lead to many airline companies to lose expected trends of profitable ridership and therefore with the loss of profits came the risk of bankruptcy.



Image Source

Fictious Airways like many airlines cares a lot about the safety of every passenger and crew member. As a world class travel company that has many frequent flights to international and domestic destinations, they care about ensuring that all who travel with them make it to where they need to travel to and back safely to their homes. But for Fictious Airlines, they knew that no matter how much they cared, caring alone would not enough to help increase ridership. They needed to figure out a way to build on the quality of their brand and make the theme of their next actions all about air travel safety.

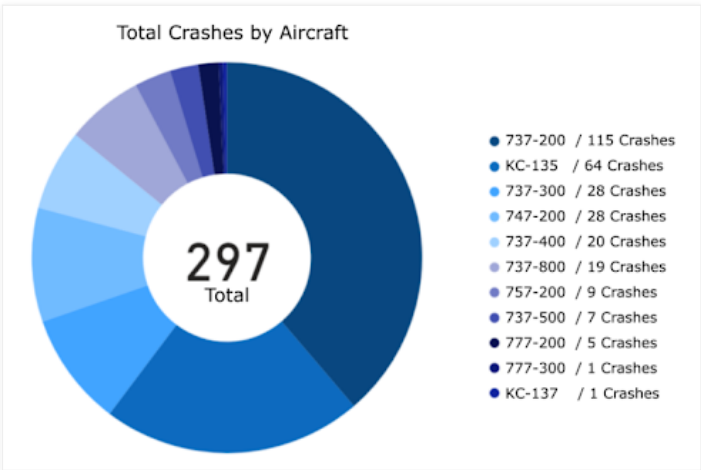
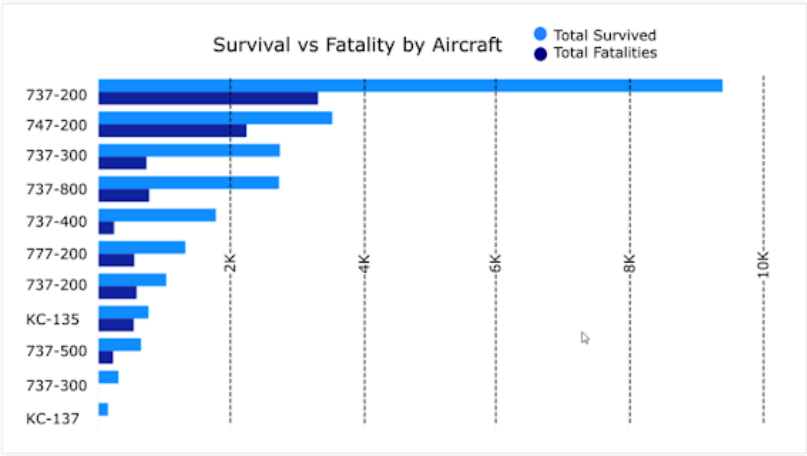
Fictious Airlines decided to engage a team of data scientist to help better understand the environmental variables of the problem they are being faced with and to develop actionable choices to improve their situation.



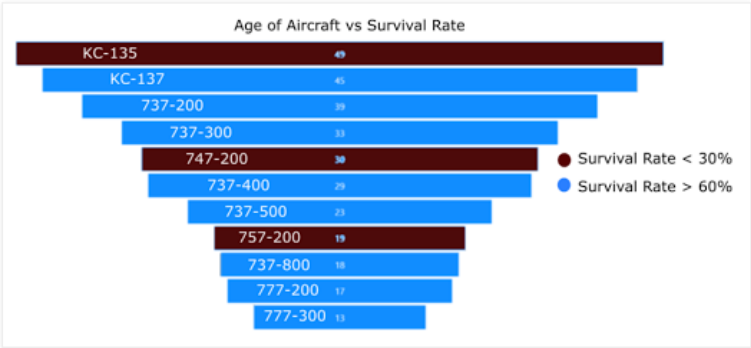
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After having spent a couple weeks discussing the problem with key subject matter experts at Fictious Airlines, the team of data scientist gathered all the data about the number of flights, the history of all the planes that Fictious Airlines owns and the information about each of the crashes

that their planes have been involved with. This information included the counts of fatalities and survivors per each of the crashes.



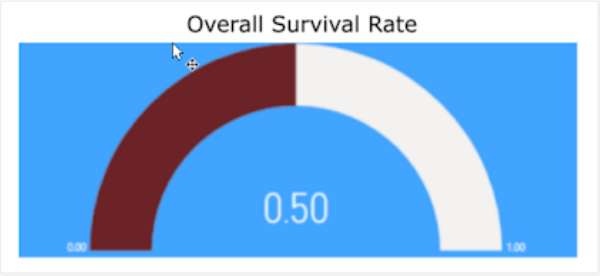
Then they collaborated with the key subject matter experts at Fictious Airlines so to best understand the data they had collected. Next they explored the data using exploratory data analytics to find out if there were any indications of erroneous data, identify and validate potential key correlations along with the strength of their relationships.



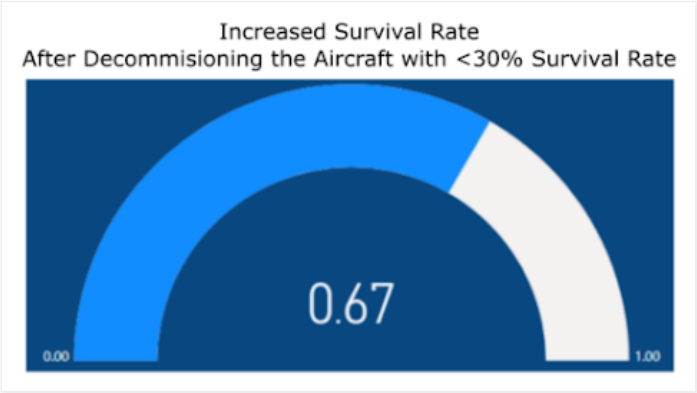
They then found that there are specific planes that have higher rates of fatalities, however to spin it to be more on the positive side - they flipped the indicator so that the metric would be called, "survival rate".

Type of aircraft	Average of Survival Rate
Boeing 777-300	1.00
Boeing KC-137 Stratoliner	1.00
Boeing 737-400	0.85
Boeing 737-300	0.75
Boeing 737-800	0.68
Boeing 737-200	0.61
Boeing 737-500	0.60
Boeing 777-200	0.60
Boeing 757-200	0.29
Boeing KC-135 Stratotanker	0.19
Boeing 747-200	0.12

With that said, they were able to identify three specific aircraft owned by Fictious Airlines that had very low survival rates. Using this new named metric called, "Survival Rate" they decided to drive the theme of their stake holder presentation around, "The action items needed to increase the Overall Survival Rate for Fictious Airlines and improve safety".



In this presentation, they targeted actions to be taken to decommission three aircraft that had a low likeliness of survival if these planes were involved in a crash. Included in the presentation were the visualizations that supported their findings on the three aircraft vs the others. These supportive visuals displayed each of Fictious Airlines aircraft crash details on the age of the planes, locations of crashes, the number of survivors per plane along with fatalities. It made it very clear that the planes that had a survival rate of more than 60% was better than the three aircraft that had lower than 30% survival rate. Furthermore, meaning you had a very good chance of not surviving a plane crash in those 3 model planes. After having shared this information with their stake holders, they were greatly appreciated for their hard work and immediately approved the next steps toward removing the 3 bad planes from service.



Well perhaps this team of data scientist aren't really super human heroes with powers from another far far away planet. However, it was their skills combined with their tenacity to find the truth that helped save the day for Fictious Air.



[Image Source](#)

Thank you for reading! Safe Travels!

Note: This is a fictional post submitted for an assignment. Fictious Airways is not a real airline company.

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