Assignment 2.3, Project Task 1: Dashboard

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There is a fair amount of wiggle in worldwide passenger airline accident numbers annually. While there has been a blip of increased accidents in recent years, overall numbers are still within a normal amount of variation. Despite the increased attention we've seen due to media reports, these numbers do not represent any sort of increasing trend, even in recent years. In fact, we've seen quite the opposite over time as fatal airline accidents have continued to decrease, even as overall flight numbers have steadily risen.

For my dashboard I have chosen a dark theme in part because it is easier on the eyes for something my audience will be looking at for a longer duration, but also because we are talking not just about airline safety, but actual people's lives being lost, which is a darker subject matter. I have a colorblind colleague and I was a bit concerned with the default color scheme having some reds and greens, so I took a screenshot and uploaded it to a color-blindness simulator where I found that there appeared to be enough contrast in the shades of color to differentiate between them.

When it comes to airline accidents, smaller aircraft tend to crash at higher rates than the larger passenger planes we use for travel. I included a map of fatal accidents in the last 10 years that only includes larger aircraft, showing that the vast majority of accidents take place in Asian and Middle Eastern countries with none in the United States, which is where our Airline operates. Below this I show that of the US passenger flight accidents in recent years, the vast majority occurred in Alaska compared to the lower 48. This is likely because small aircraft is a much more common method of transport in Alaska, but also shows the low relative risk of flying in the contiguous US. Using this same data, we see that roughly half of the accidents occur while en route, which also accounts for the longest duration phase of the flight. I chose a donut graph because the actual numbers aren't that important, but I wanted to show that 'en route' accounts for roughly as many accidents as all the others combined.

Fatalities by aircraft type shows that ultralights are far more dangerous than passenger flights and if we were to account for the number of flights for each type that passenger flights would appear even safter yet, relative to the others.

The most important graphs I wanted to show are grouped in a trio over on the right. These illustrate not just the real number of accidents decreasing over time, but also shows that accidents continue to decline despite the steady increase in overall flight numbers, resulting in a very low number of accidents per million flights worldwide. This helps to show that flight is an incredibly safe means of travel. Note that I also highlighted the 2020 bar to help explain the unusual dip in flight numbers, relative to preceding years.