Project Task 2 Supporting Documentation

For this task, I wanted to tell a story about the health and safety of the U.S. Airline industry and specifically, to discuss Southwest Airlines as if I was presenting to its executive leadership. I chose the following points to cover which corresponds to the main slides in the executive summary:

* U.S. Airline Safety – Describes airline safety by showing metrics for accidents from 1983 – 2014. Stacked vertical bar graph was used because it could break down the accidents into Fatal or Non-Fatal categories.
* U.S. Auto Safety – Describes U.S. auto safety by showing metrics for accidents from 2010 – 2018. Stacked vertical bar graph was used because it could break down the accidents into three different categories and to be consistent with the graph for airline.
* Incidents and Fatalities – Metrics for Top 20 U.S. Airlines and shows how Southwest Airlines has performed. Horizontal bar graph was used because there was a long list of airlines with differing amounts.
* Passenger Metrics – Shows the growth of passenger travel, especially for Southwest. Line graph chart was used to contain multiple lines representing different companies.
* Revenue – Indicates healthy U.S. airline industry with increasing revenue over the years. Line graph chart was used to be consistent with the previous slide and representing different companies.

I was to able use some of the same data from project task 1 but presented them in a different way so that it worked well with the other data in telling a consistent story as well as capturing the attention of the company leadership. For my graphs, I made sure to add titles and labels for the axis as before. I also added a legend wherever it was needed. I used colors to accommodate audience members that may be colorblind. I consistently used the same colors for my graphs to match the data where it made sense. Also, I generated all the graphs using Python’s matplotlib and plotly library, so they would all have the same look and feel.

I found a free executive summary PowerPoint that I could use as a template at smartsheet.com (<https://www.smartsheet.com/executive-summary-templates>). It fit a nice, visual style that looked very professional and was easy to modify for my presentation.

Data Sources:

https://catalog.data.gov/dataset/accidents-and-accident-rates-by-ntsb-classification-1995-through-2014-for-u-s-air-carriers

https://catalog.data.gov/dataset/accidents-fatalities-and-rates-1995-through-2014-for-u-s-air-carriers-operating-under-14-c-2e5ec

[https://cdan.nhtsa.gov/tsftables/tsfar.htm#](https://cdan.nhtsa.gov/tsftables/tsfar.htm)

New Data Sources:

<http://web.mit.edu/airlinedata/www/Traffic&Capacity.html>

Research References:

Silver, Nate. "Should Travelers Avoid Flying Airlines That Have Had Crashes in the Past?" <https://fivethirtyeight.com/features/should-travelers-avoid-flying-airlines-that-have-had-crashes-in-the-past/>

Difference Engine: Up, up and away. Retrieved from https://www.economist.com/babbage/2013/01/07/difference-engine-up-up-and-away

Github Repository: https://github.com/cvibanez/DSC640\_Project