**IBM DATA ANALYTICS CAPSTONE PROJECT**

The projects in this repository consists of two tasks. Both tasks involved gathering, extracting, wrangling, analysing, and visualizing flight data derived from local U.S. domestic reporting airlines to improve flight reliabilty and customer reliability.

In the dashboard there are two repost items

* Yearly airline performance report
* Yearly average flight delay statistics

**COMPONENTS OF THE DASHBOARD REPORT**

1. YEARLY AIRLINE PERFORMANCE REPORT

FOR THE YEAR CHOSEN

1. Number of flights under different cancellation categories using bar chart.
2. Average flight time by reporting airline using line chart.
3. Percentage of diverted airport landings per reporting airline using pie chart.
4. Number of flights flying from each state using choropleth map.
5. Number of flights flying to each state from each reporting airline using treemap chart.
6. YEARLY AVERAGE FLIGHT DELAY STATISTICS

FOR THE YEAR CHOSEN

1. Monthly average carrier delay by reporting airline for the given year.
2. Monthly average weather delay by reporting airline for the given year.
3. Monthly average national air system delay by reporting airline for the given year.
4. Monthly average security delay by reporting airline for the given year.
5. Monthly average late aircraft delay by reporting airline for the given year.

Using Pandas to extract and prepare the data for analysis, and Dash to visualize the data and create a dashboard. The rendered dashboard should look like the image below:

![flight\_performance\_report](imgs/flight\_dashboard1.png)

![flight\_dash](imgs/flight\_dashb.png)



