

Data Visualization using Tableau

Project Dataset: Flight Delays and Cancellations

- **Link here:** <https://www.kaggle.com/datasets/usdot/flight-delays>
- The monthly Air Travel Consumer Report from the Department of Transportation (DOT) and this dataset of 2015 flight delays and cancellations both provide a summary of the number of on-time, delayed, cancelled, and diverted flights.

Insight 1: Which Airlines or Airports have the worst delays?

- **Link here:** https://public.tableau.com/app/profile/ibram.osama/viz/Insight1_16770236881650/Dashboard1?publish=yes
- **Summary:** As we see from this bar chart the Most Airline Delays occur. The Top Airline Delay Happens in Southwest Airlines for all months. The Top Airport Delay happens in Chicago O'Hare International Airport
- **Design Explain:** I have used **bar charts** to compare numbers, stacked bars for categorical comparisons, and **maps** to depict data geographically.

Insight 2: What Causes Delay?

- **Link here:** https://public.tableau.com/app/profile/ibram.osama/viz/Insight2_16770272161990/Dashboard2?publish=yes
- **Summary:** As we see from this bar chart the Most causes Delays occur. The Most causes Delays Happens by Late Aircraft.
- **Design Explain:** **Bar Chart** are helpful Discrete, continuous, or categorical variables and **Lines Continuous chart** used for display the development (trend) of a phenomenon over time; So I used it to display the Avg Delay Type per Month.

Insight 3: What is Cancellations Sum in States and in Months?

- **Link here:**
https://public.tableau.com/app/profile/ibram.osama/viz/Insight3_16770381419140/Dashboard3?publish=yes
- **Summary:** we can see where the most cancellations occur. It appears that most cancellations happen in Texas for all Months. If you filter according to a specific Month this state will still be at the top number of cancellations flights.
- **Design:** **Line Chart** was used to determine the Cancellation per Time. The use of a **map and a bar chart** allows for the multi-classification of geographic data, making it simple to identify states that have cancelled and identify the states with the worst cancellations.

Resources:

1. <https://learn.udacity.com/my-programs?tab=Currently%2520Learning>
2. <https://www.youtube.com/watch?v=9xqHA732LMA>
3. <https://github.com/xZystem/Ucacity-Flights-Delays-and-Cancellations>
4. <https://youtu.be/zfjsMoRbW-8>
5. <https://www.analyticsvidhya.com/blog/2020/07/8-data-visualization-tips-to-improve-data-stories/>