https://www.kaggle.com/datasets/giovamata/airlinedelaycauses

Departure Delay Vs Arrival Delay

* Arrival Delay is of higher volume in minutes compared to departure delay

Departure Delay Volume in Minutes

* Departure delay has the highest volume in below 200 minutes

Total Delay Time Cause and Volume

* Carrier Issues are the highest in Minutes total delay time next with NAS
* Carrier issues and Nas happen about the same number of times though
* The weather surprisingly is really low compared to the others.

Airline Delay occurrences

* It shows the number of times delays happen with certain carriers and Southwest Airlines happens the most, but they have the highest volume of occurring flights.
* HA Airlines has a really high percentage of its flights being delayed.

**1. Time-based Delay Patterns**

* How do delays vary by time of day? Are there peak hours for delays?
* Do delays differ on weekdays vs weekends?
* Are certain months or seasons more prone to delays?

**2. Route-specific Analysis**

* Which origin-destination airport pairs have the highest average delays?
* Are delays more common on long-haul vs short-haul flights?
* What routes have the most cancellations or diversions?

**4. Delay Impact on Arrival vs Departure**

* Compare the distribution of departure delays vs arrival delays.
* What percentage of flights make up lost departure delay time by arrival? (i.e., do flights recover some delay en route?)

**8. Financial or Operational Impact (Advanced)**

* Estimate cost impact of delays using average delay times and typical operating costs.
* Analyze impact of delays on passenger satisfaction or flight cancellations.