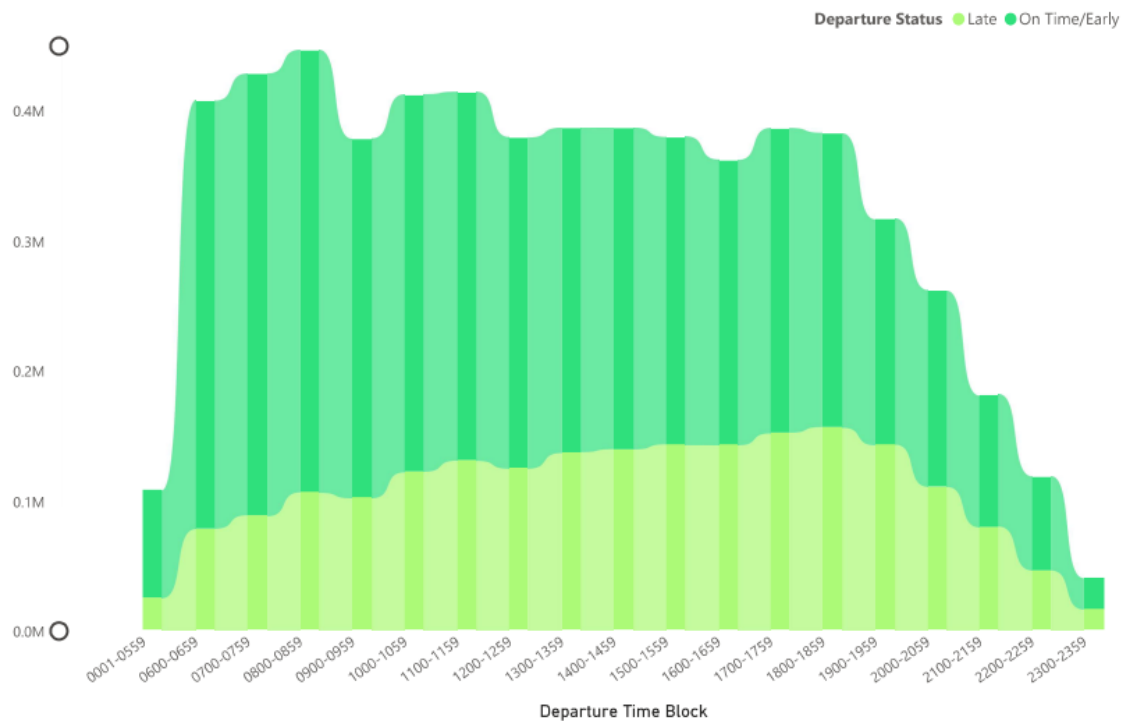


Exploratory Data Analysis Storm Troopers

1. Exploring Departed Flight Data

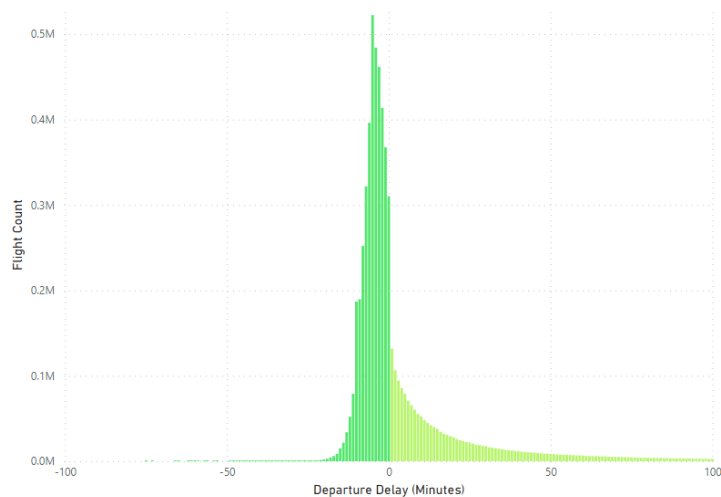
- Daily Flight Patterns

(2021) Total Flight Count by Departure Status Over 24 Hour Window

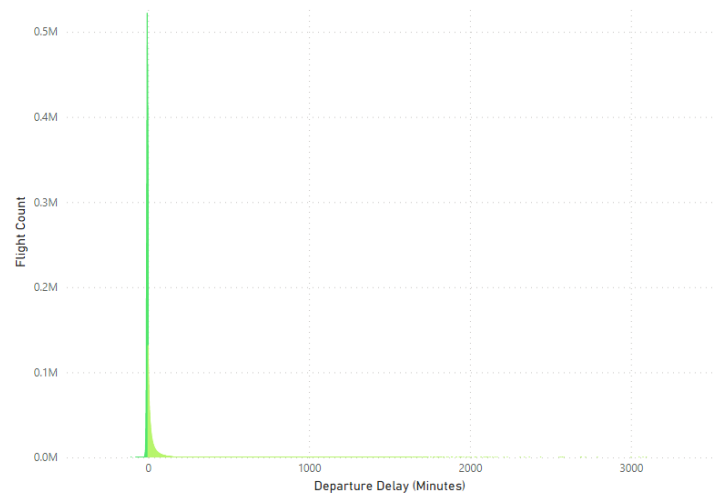


- In total, there were more on-time/early flights (4,139,345) than late flights (2,046,525).
- The time block with the largest divergence in on-time/early flights and late flights was 0700-0759 (252,404 more early/on-time flights than late)

Distribution of Departure Delay (Excluding Outliers)



Distribution of Departure Delay (Including Outliers)

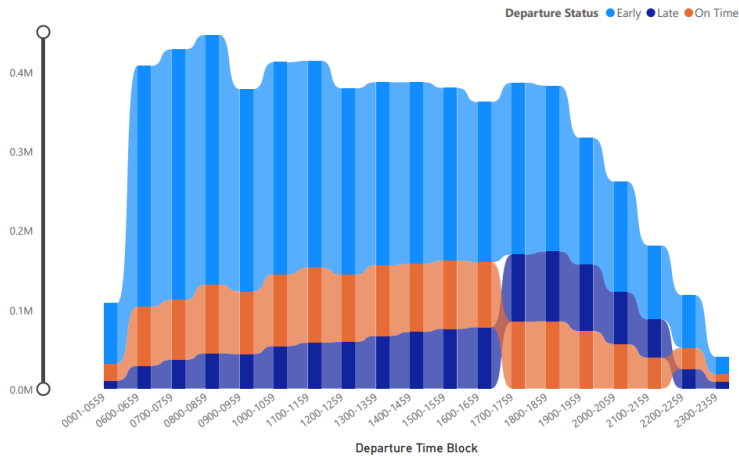


OFFICIAL Departure Status Classification:

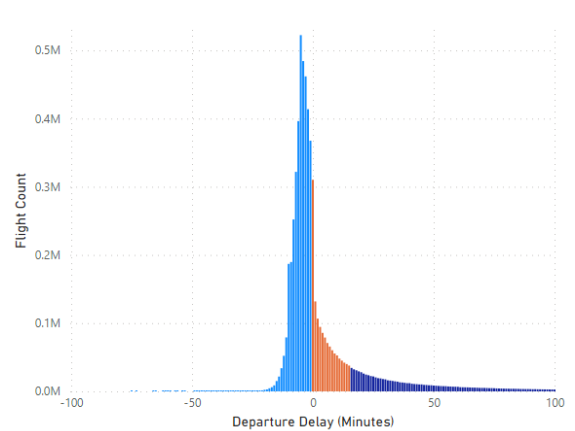
** Flights less than 15 minutes late are classified as on time

$\text{Min} < \text{Dep_Delay} < 0$	Early
$0 \leq \text{Dep_Delay} \leq 15$	On-Time
$15 < \text{Dep_Delay}$	Late

(2021) Total Flight Count by Departure Status Over 24 Hour Window



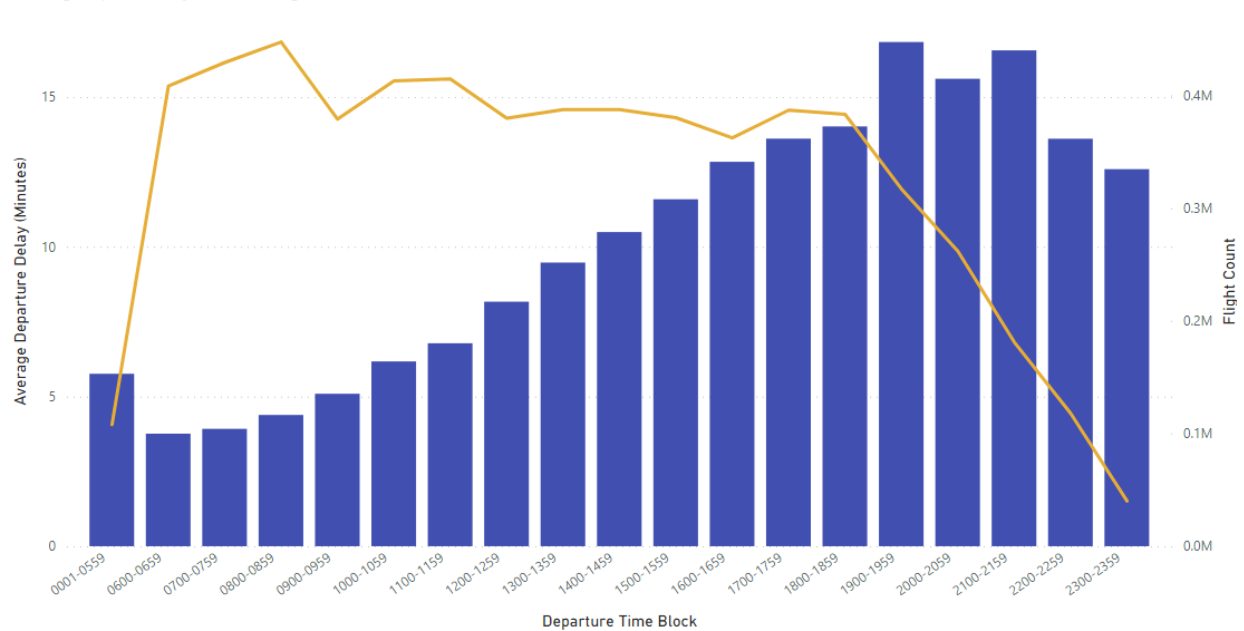
Distribution of Departure Delay (Excluding Outliers)



Flight Count, Average Departure Delay (Minutes)

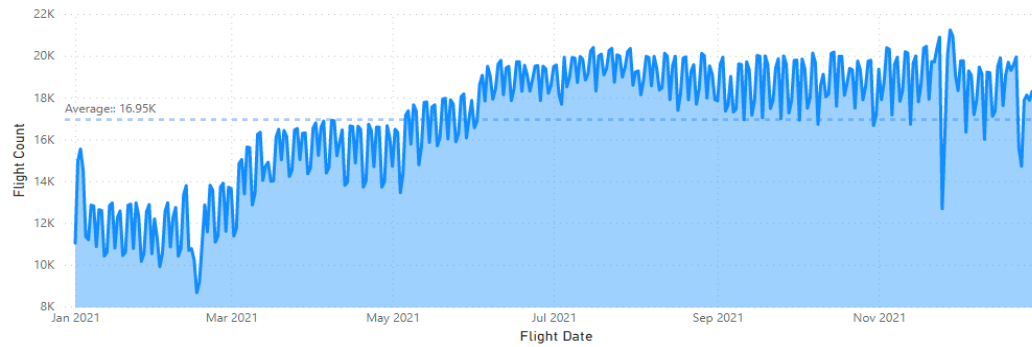
BY DEPARTURE TIME BLOCK

● Average Departure Delay (Minutes) ● Flight Count

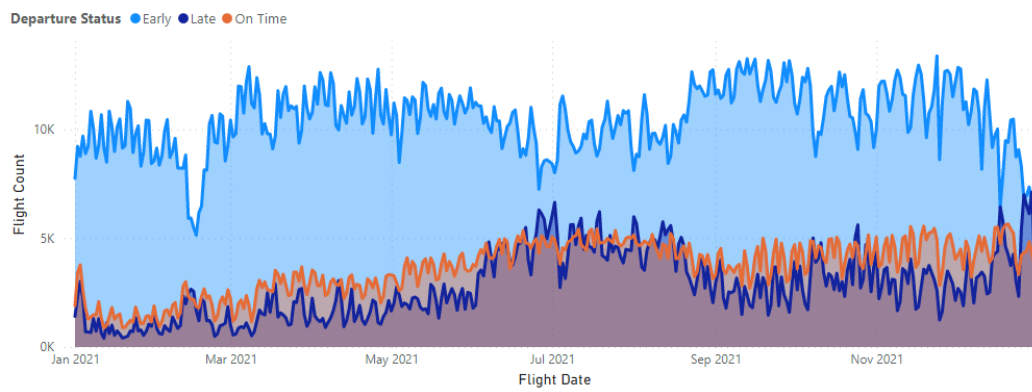


Annual flight patterns

Flight Count by Date

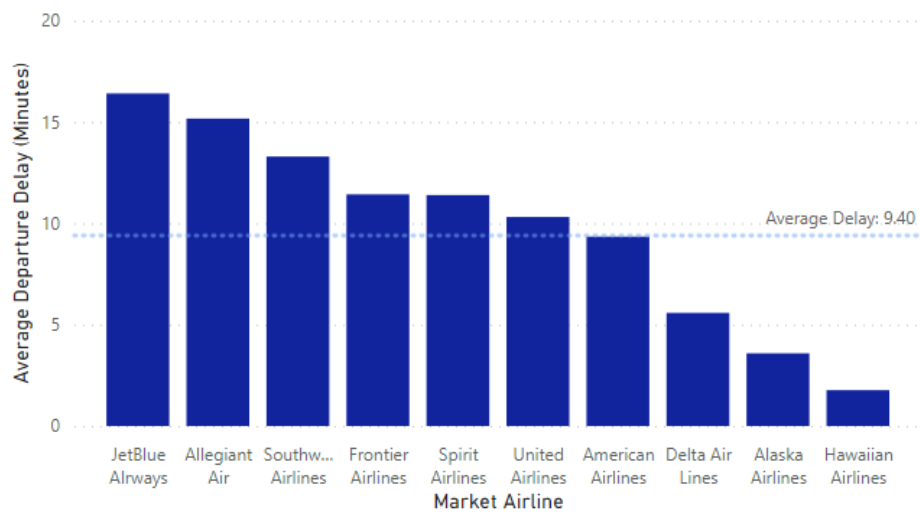


Flight Count by Departure Status and Date



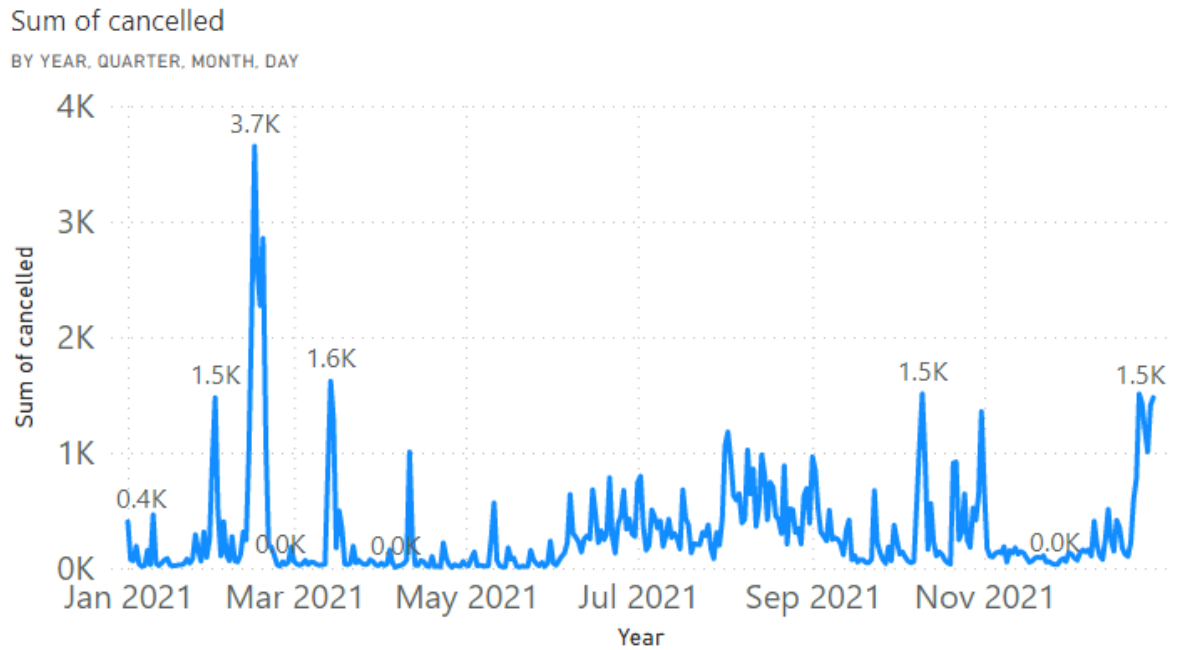
Delays by (Market) Airline

Average Departure Delay (Minutes) by Airline

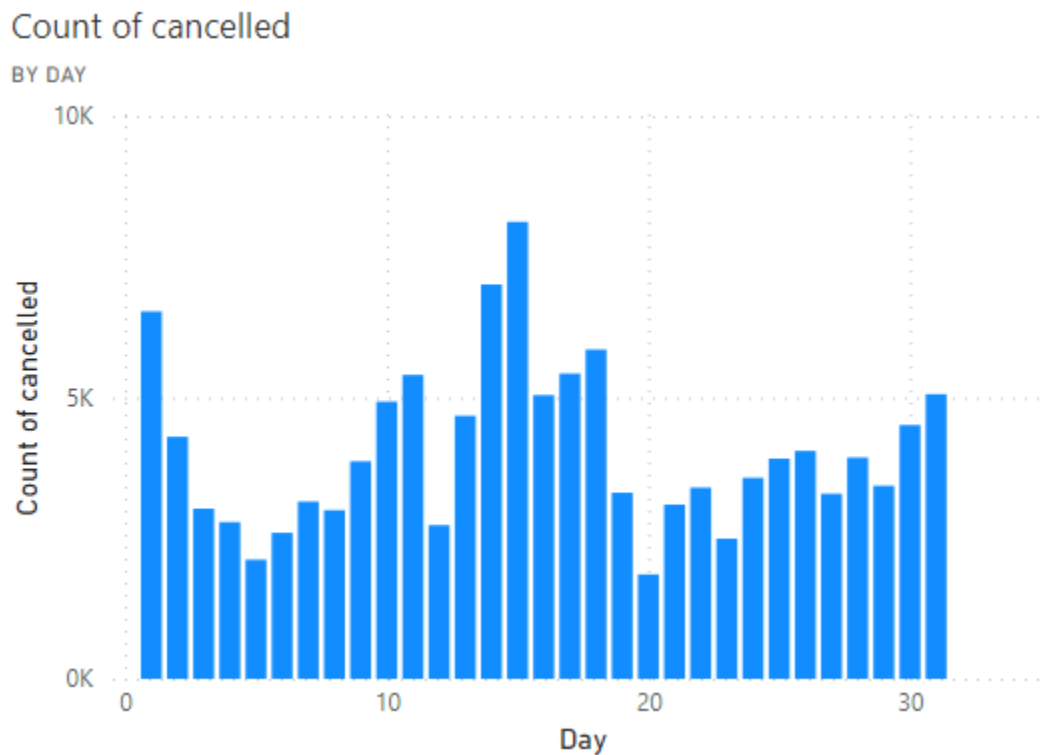


2. Exploring Canceled Flight Data

Count of canceled flights throughout the course of 2021



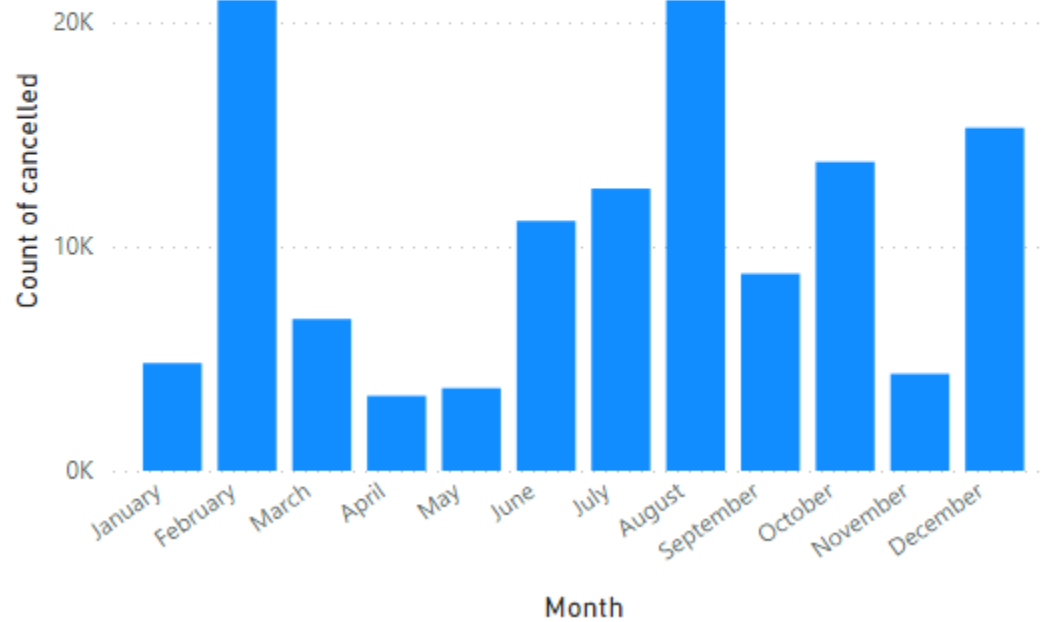
Count of canceled flights by day of the month



Count of canceled flights by month

Count of cancelled

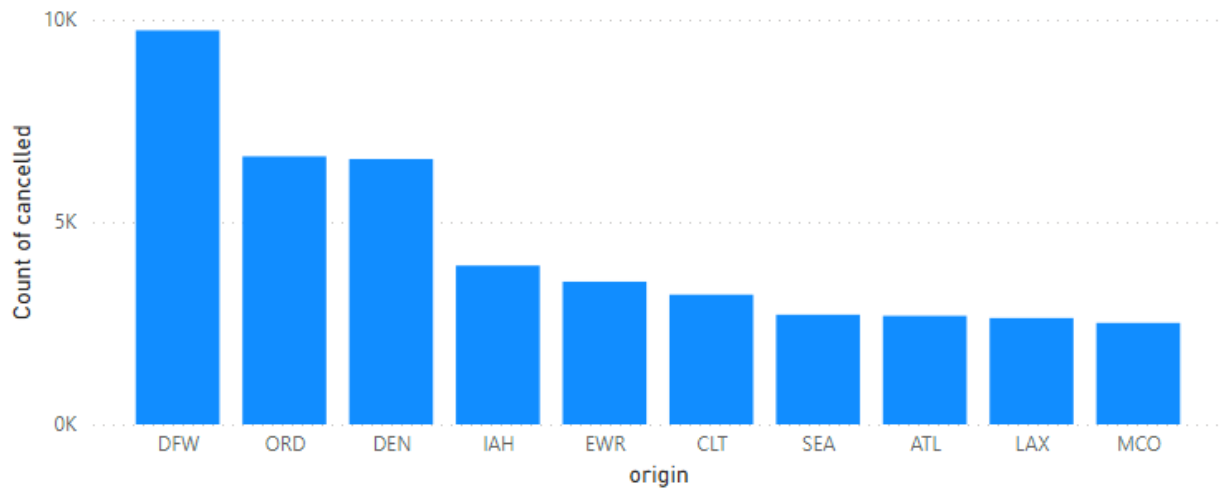
BY MONTH



Top 10 count of canceled flights by origin:

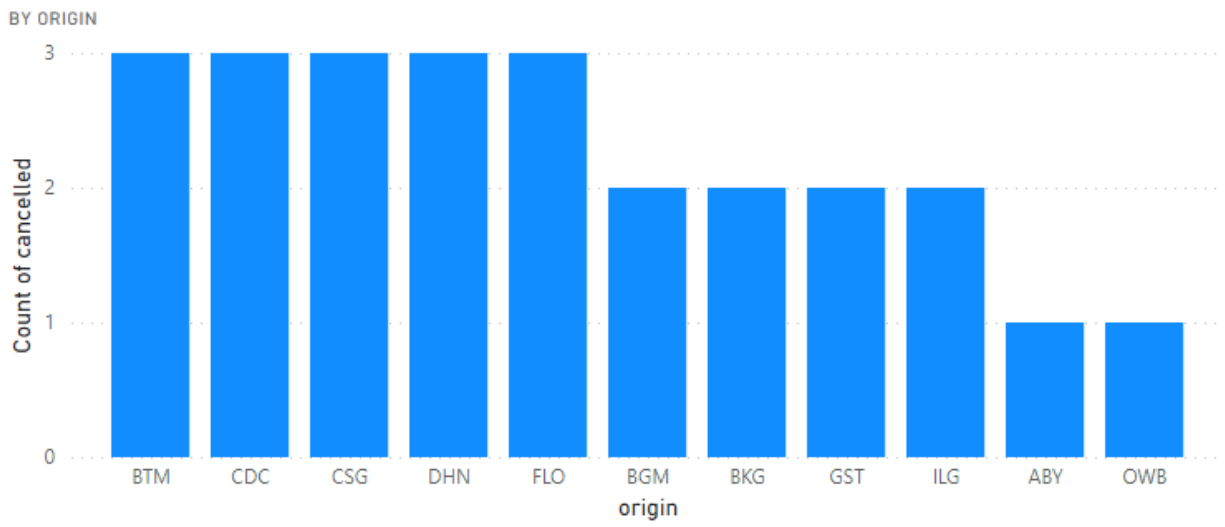
Count of cancelled

BY ORIGIN



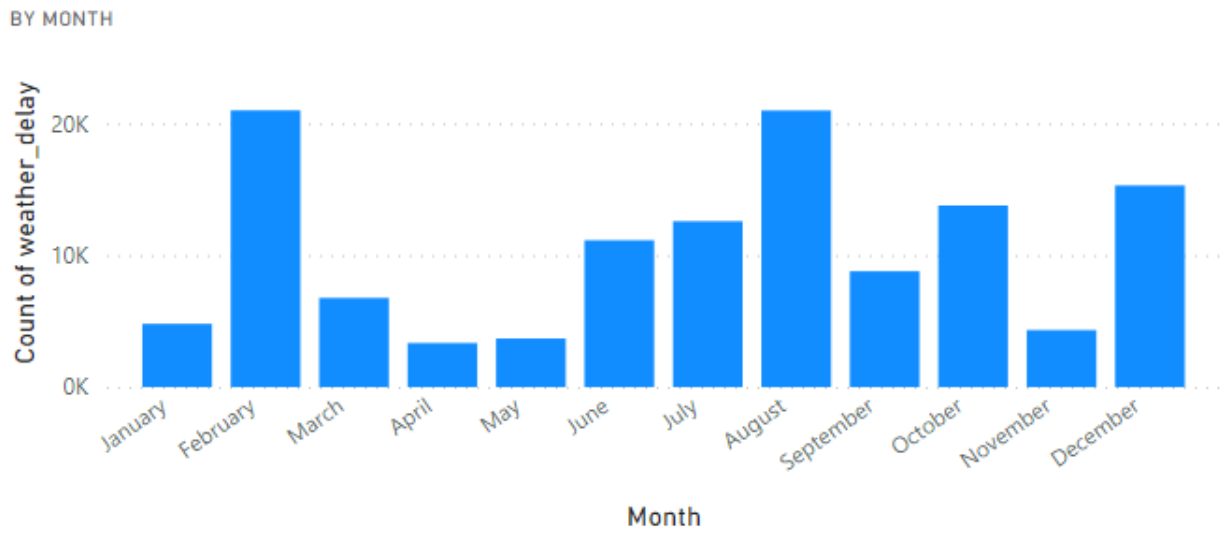
Bottom 10 count of canceled flights by origin:

Count of cancelled



Count of weather delay by month

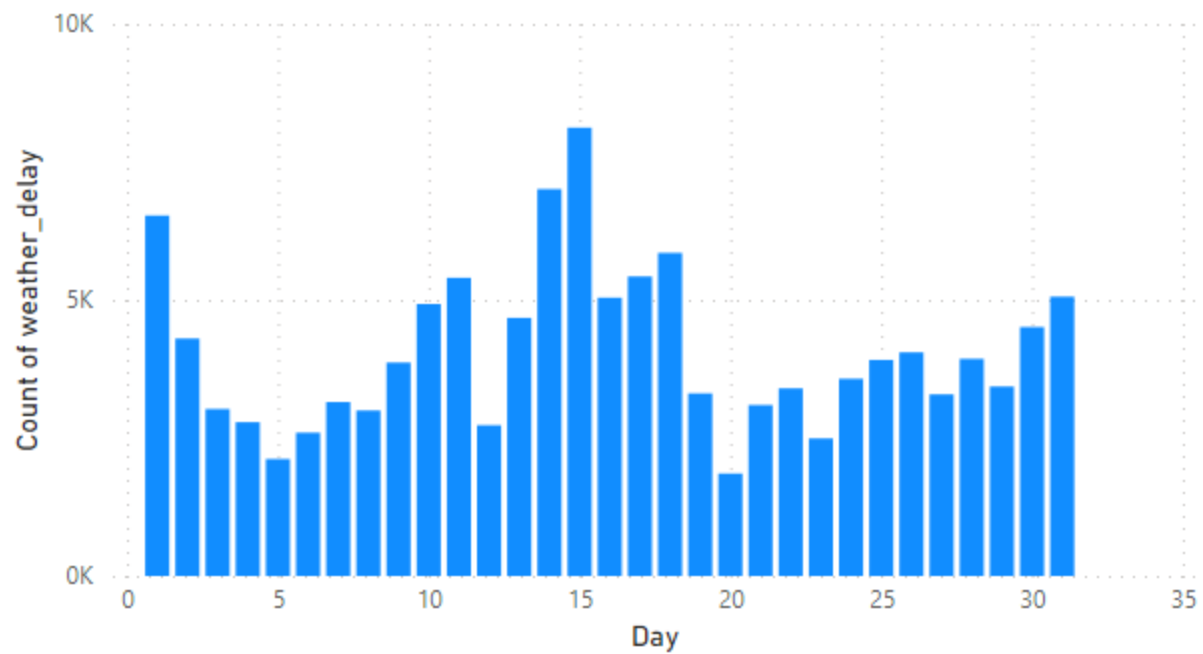
Count of weather_delay



Count of weather delay by day of month:

Count of weather_delay

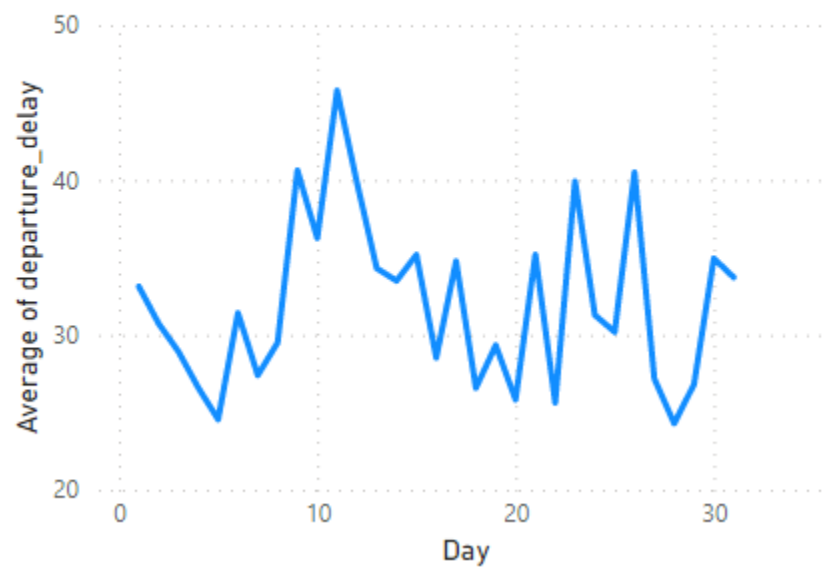
BY DAY



Average departure delay by day in minutes:

Average of departure_delay

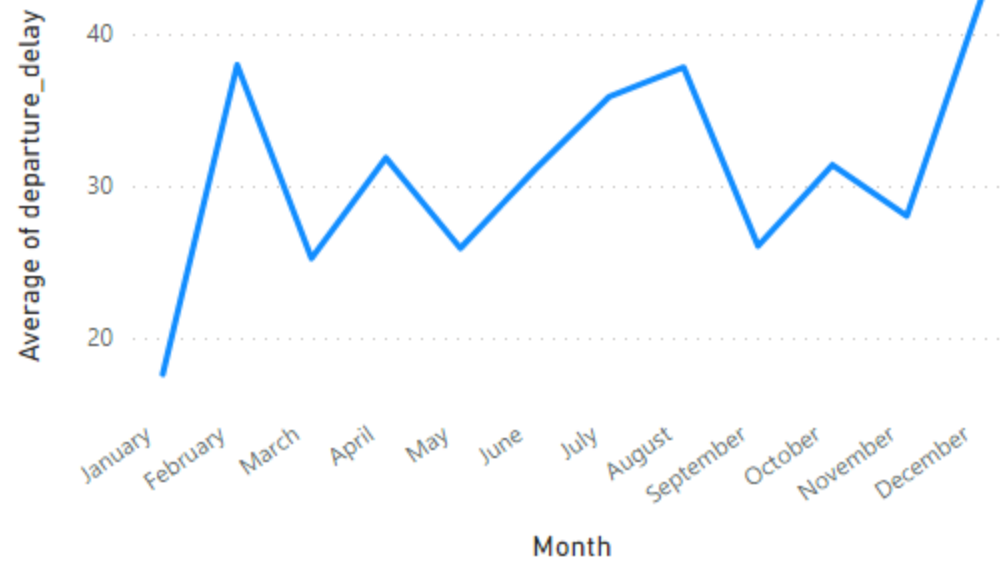
BY DAY



Average departure delay in minutes by month:

Average of departure_delay

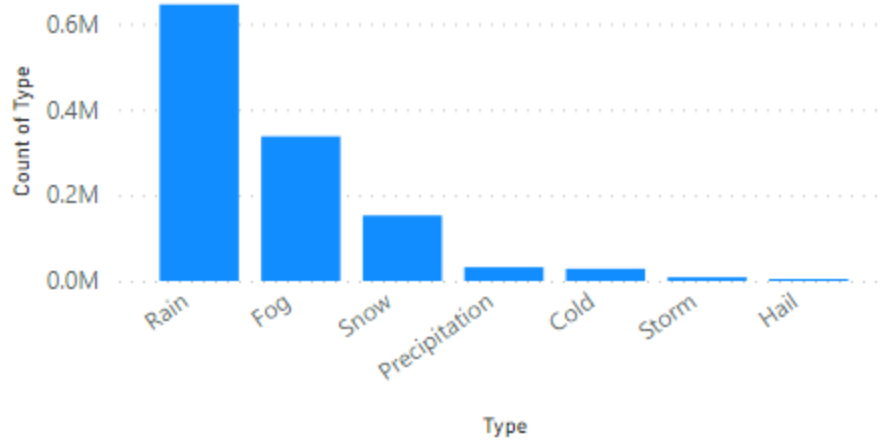
BY MONTH



3. Exploring Weather Data

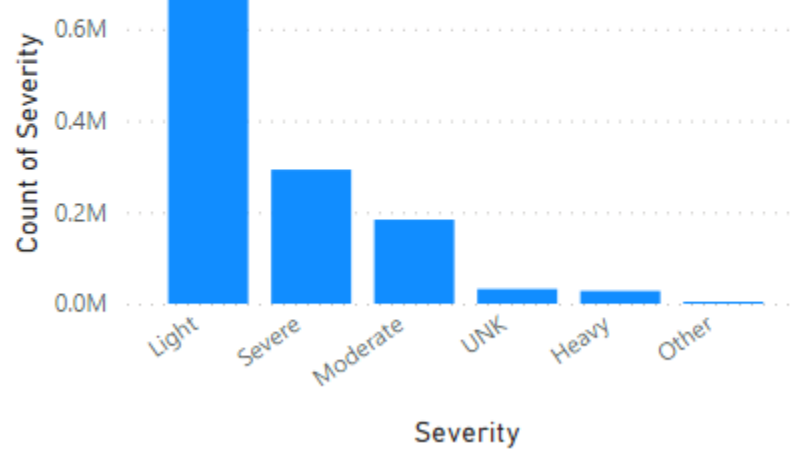
Count of Type

BY TYPE



Count of Severity

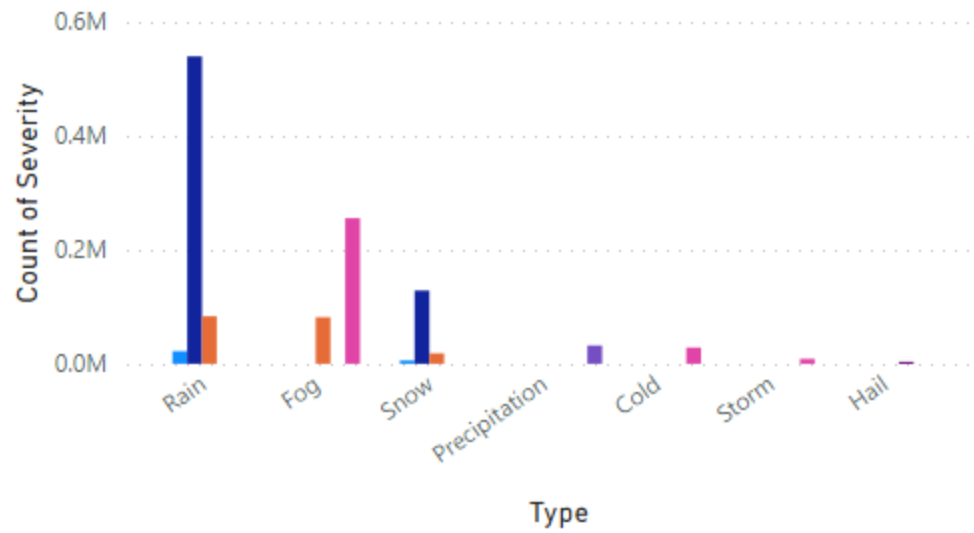
BY SEVERITY



Count of Severity

BY TYPE, SEVERITY

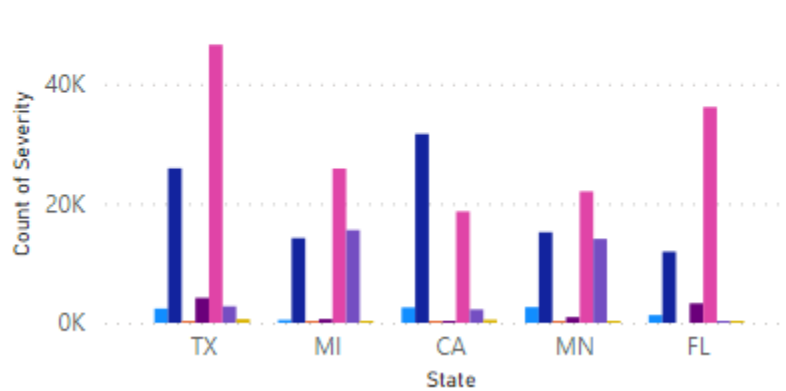
Severity ● Heavy ● Light ● Moderate ● Other ● Severe ● UNK



Count of Severity

BY STATE, TYPE

Type ● Cold ● Fog ● Hail ● Precipitation ● Rain ● Snow ● Storm



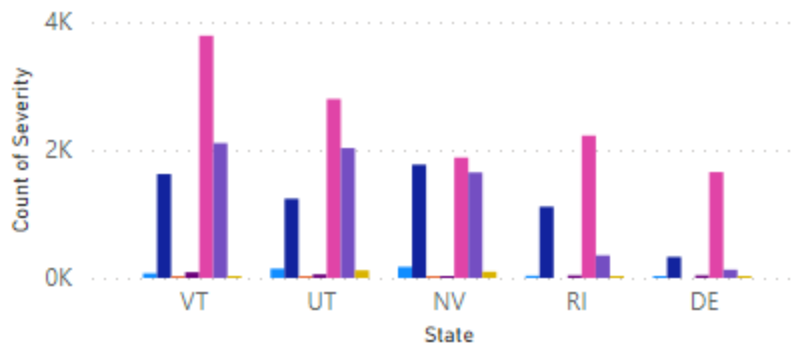
severity

top 5 states by count of

Count of Severity

BY STATE, TYPE

Type Cold Fog Hail Precipitation Rain Snow Storm



[Open in Power BI](#)

weather eda

Data as of 1/24/23, 4:15 PM

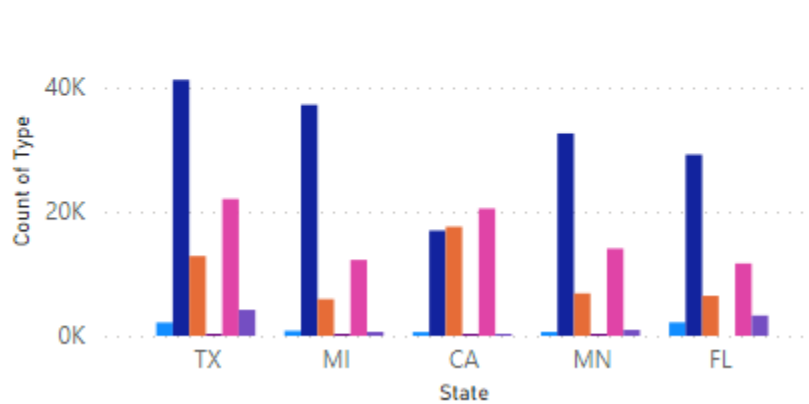
Filtered by **State** (bottom 5 by Count of Severity)

bottom 5 states by count of severity

Count of Type

BY SEVERITY, STATE

Severity Heavy Light Moderate Other Severe UNK



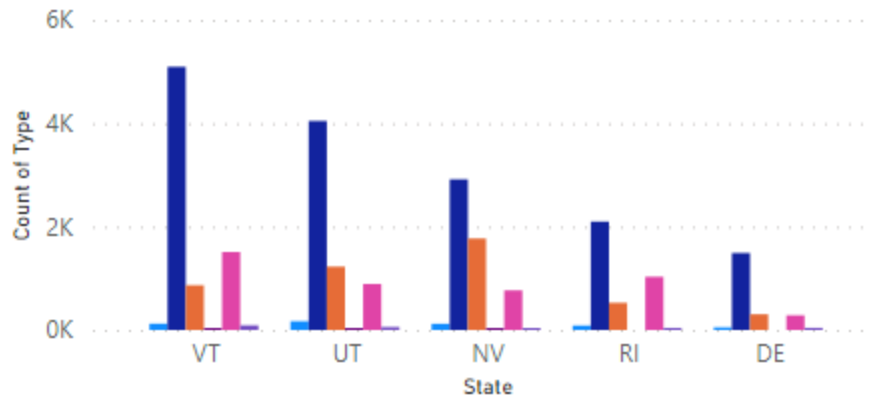
of type of weather

top 5 states by count

Count of Type

BY STATE, SEVERITY

Severity ● Heavy ● Light ● Moderate ● Other ● Severe ● UNK



bottom 5 states

by count of type of weather

4. Exploring Full Data

Departed flights descriptive statistics

https://drive.google.com/file/d/1vZk_DdwNFR-pLtXcjrFtFWmS1nsi3fu8/view?usp=sharing