



This Power BI Project provides a comprehensive analysis of US Flights, focusing on key metrics such as flight details, cancellation, diversions, and state-specific environmental conditions like temperature, pressure, wind, etc. The interactive dashboards including:

- 1. Flight Details** - Offering insights into flight patterns and statistics.
- 2. Cancellation/Diverted Details** - Highlights trends and reasons behind disruptions.
- 3. Map** - Visualising all the states with total flights and cancellation count.
- 4. State Details** - Presenting a detailed overview of weather conditions and their potential impacts on flights operation. In depth analysis of every state flight pattern.

This projects aims to deliver valuable insights for airlines, travellers, and stakeholders by leveraging data to enhance decision-making and operational efficiency.



List of Tables used in this Project

Data



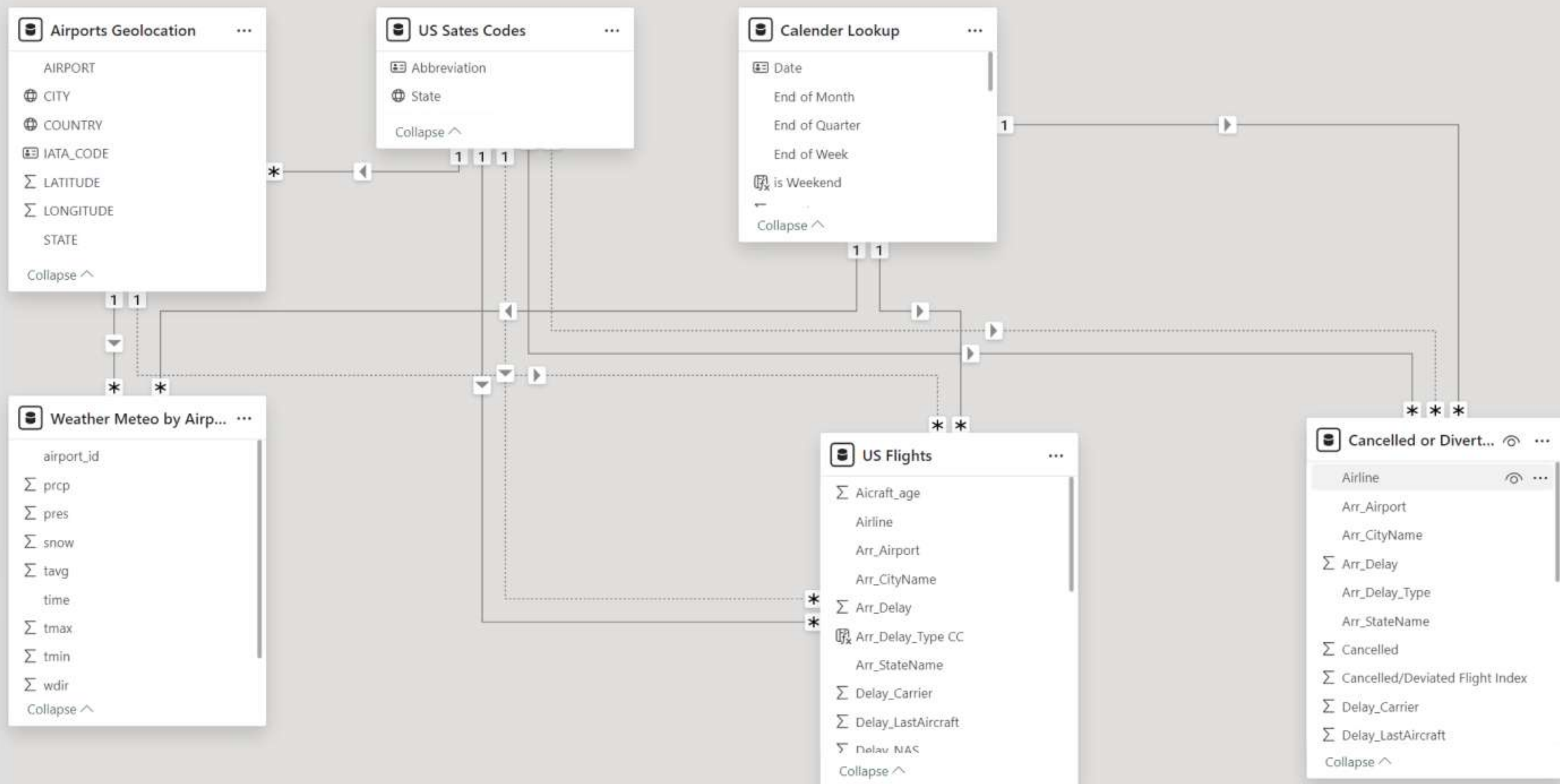
Search

- > Measure Table
- > Airports Geolocation
- > Calender Lookup
- > Cancel/Divert Matric Selection
- > Cancelled or Diverted
- > US Flights
- > US Sates Codes
- > Weather Meteo by Airport

- 1. Measure Table** : Contains all the measures.
- 2. Airport Geolocation**: Contains names of airports, their city, state code, latitude and longitude.
- 3. Calender Lookup**: Contains dates, details of week, etc.
- 4. Cancel/Divert Metric Selection**: Contain a field parameter.
- 5. Cancelled or Diverted**: Contains details of all the cancelled and diverted flights.
- 6. US Flights**: Contains details of all the flights that take up successfully and without being diverted
- 7. US State Codes**: Contains all the US state codes
- 8. Weather Meteo by Airport**: Contains the weather details of the airports.



Table Relationships structure





Measure and Parameter Table

Measure Table	...
Average Airline age	
Average Arrival Delay by Airline	
Average Departure Delay by Airline	
Cancellation %	
Cancellation Target	
Cancelled Flights Count	
Diverted Flights Count	
Diversion %	
Flights Departure Time	
Monthly Cancellation Difference	
Monthly Flight %	
Monthly Flight Difference	
Previous Month Cancellation count	
Previous Month Flight count	
Target Flight Count	
Total arrival airport	
Total Cancelled flights	
Total Cities	
Total departure airport	
Total Duration by Airline	
Total US Flights	
TotalFlightsByAirport	
Collapse ^	

Cancel/Divert Matric Se...	...
Cancel/Divert Matric Selection	
Cancel/Divert Matric Sele...	
Cancel/Divert Matric Sele...	
Collapse ^	

Flight Details Dashboard

Part - 1



FLIGHT DETAILS

6,743.40K

Total Flights

13.48

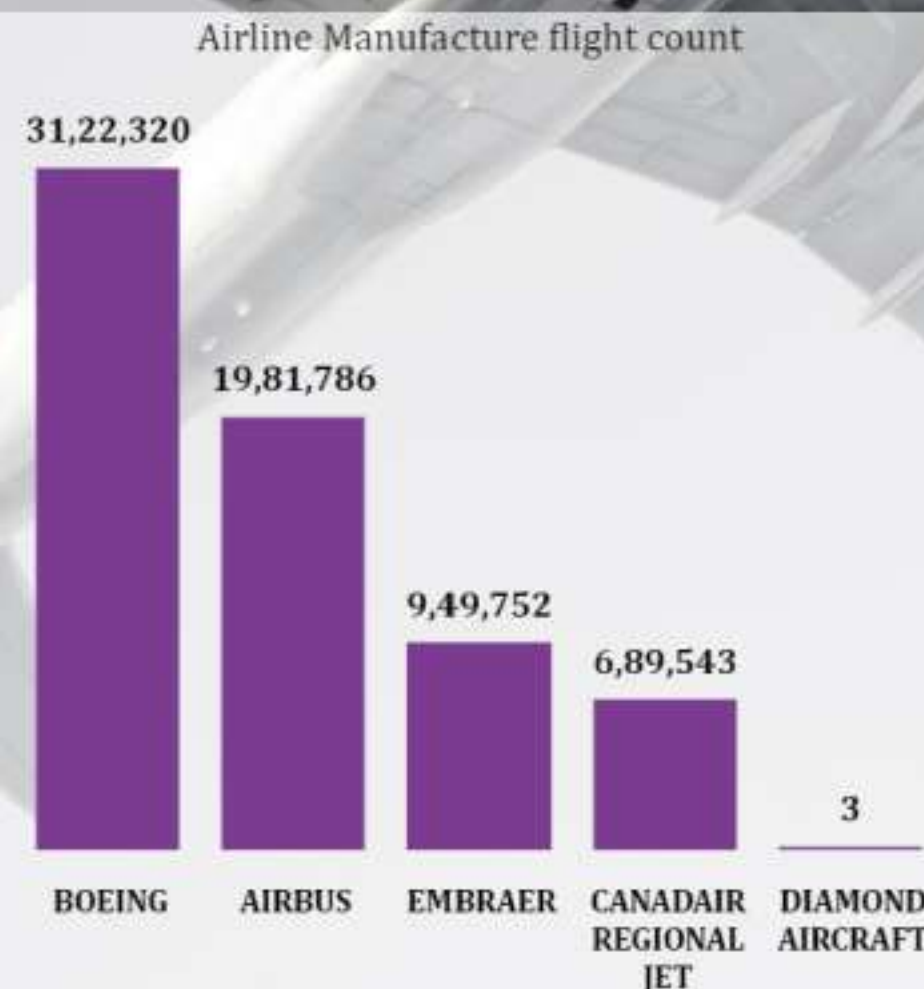
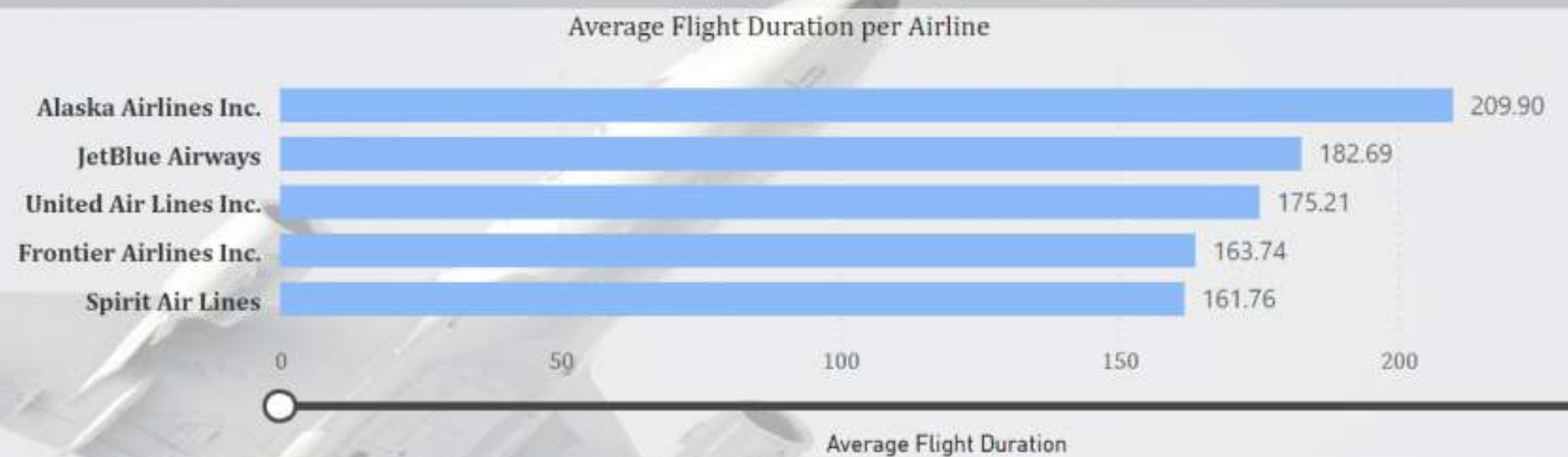
Average Airline age (in Years)

350

Total Airports

336

Cities



Airline	Departure Delay (mins)	Arrival Delay (mins)
Republic Airways	3.11	-3.38
Alaska Airlines Inc.	6.07	2.58
Endeavor Air	7.02	-1.20
American Eagle Airlines Inc.	7.10	3.62
PSA Airlines	7.41	3.24
Skywest Airlines Inc.	8.77	4.47
Hawaiian Airlines Inc.	9.59	9.77
Delta Air Lines Inc	10.24	2.41
Southwest Airlines Co.	11.69	5.80
United Air Lines Inc.	12.50	6.33
Allegiant Air	15.39	14.14
American Airlines Inc.	17.44	12.30
Spirit Air Lines	19.54	14.66
Frontier Airlines Inc.	22.16	18.19
JetBlue Airways	24.27	18.47

BOEING

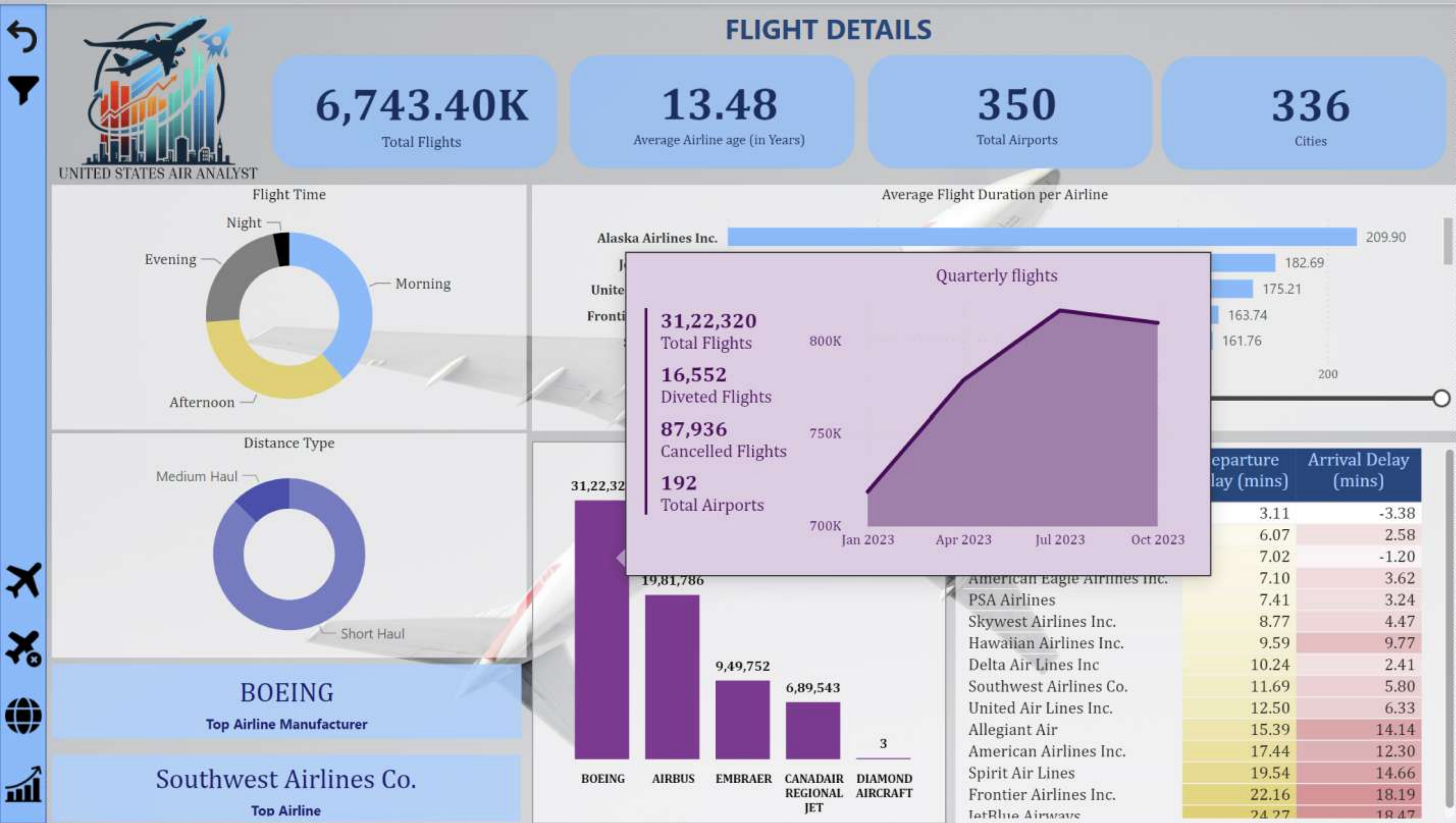
Top Airline Manufacturer

Southwest Airlines Co.

Top Airline

Flight Details Dashboard

Part - 2



Filter Panel



6,743.40K

Total Flights

13.48

Average Airline age (in Years)

350

Total Airports

336

Cities

Start of Month

- ☐ Select all
- ☐ January, 2023
- ☐ February, 2023
- ☐ March, 2023
- ☐ April, 2023
- ☐ May, 2023
- ☐ June, 2023
- ☐ July, 2023
- ☐ August, 2023
- ☐ September, 2023
- ☐ October, 2023
- ☐ November, 2023
- ☐ December, 2023

Time



Flight Type



Manufacturer

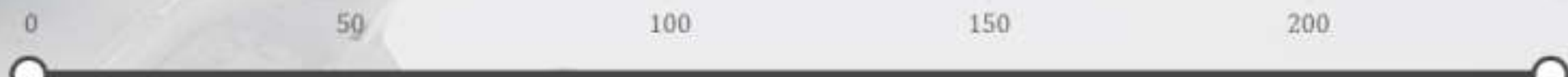
Boeing

Airlines Co.

airline

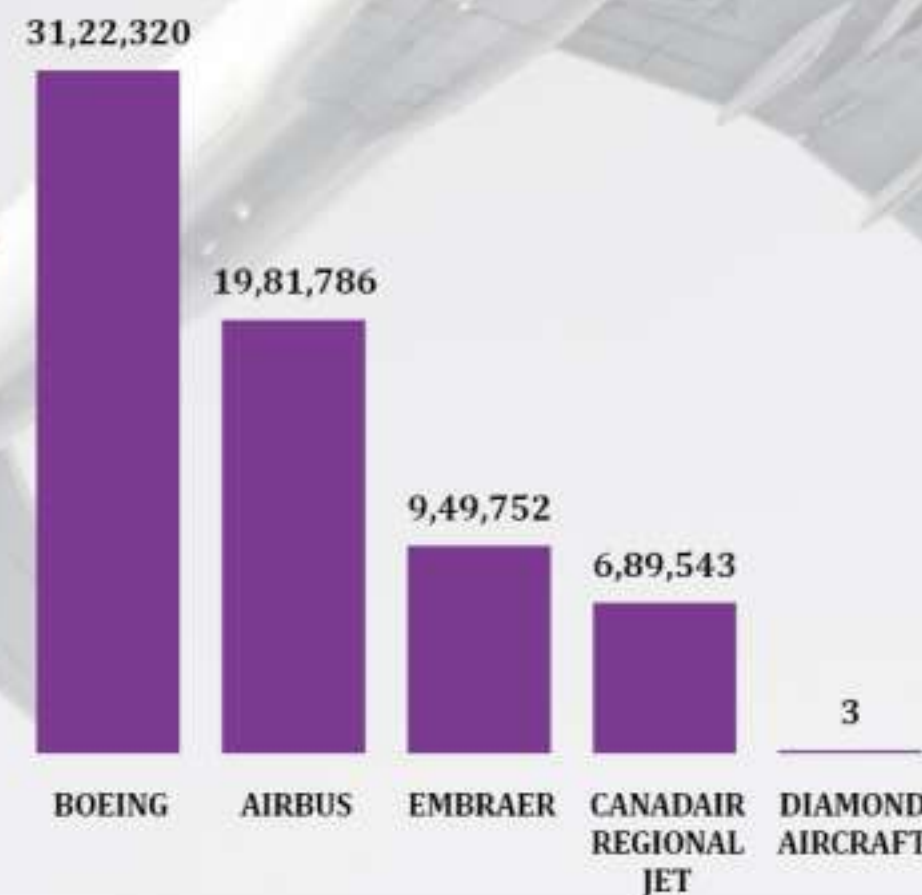
FLIGHT DETAILS

Average Flight Duration per Airline



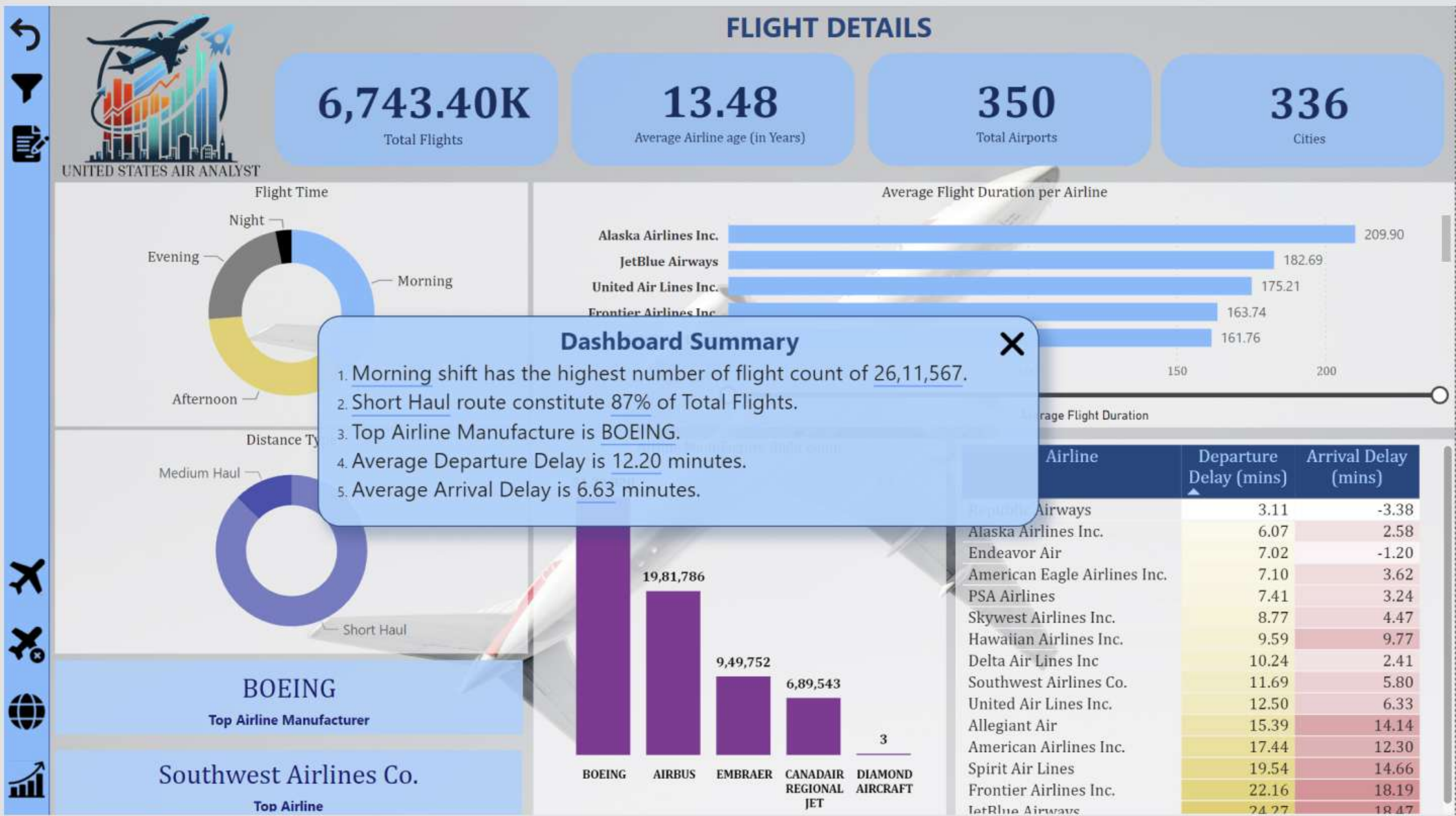
Average Flight Duration

Airline Manufacture flight count



Airline	Departure Delay (mins)	Arrival Delay (mins)
Republic Airways	3.11	-3.38
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Endeavor Air	7.02	-1.20
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American Airlines Inc.	17.44	12.30
Spirit Air Lines	19.54	14.66
Frontier Airlines Inc.	22.16	18.19
JetBlue Airways	24.27	18.47

Dashboard Narrative



Cancellation/Diversion Dashboard

Part 1



CANCELLATION AND DIVERSION DETAILS

87,936

Cancelled Flights Count

16,552

Diverted Flights Count

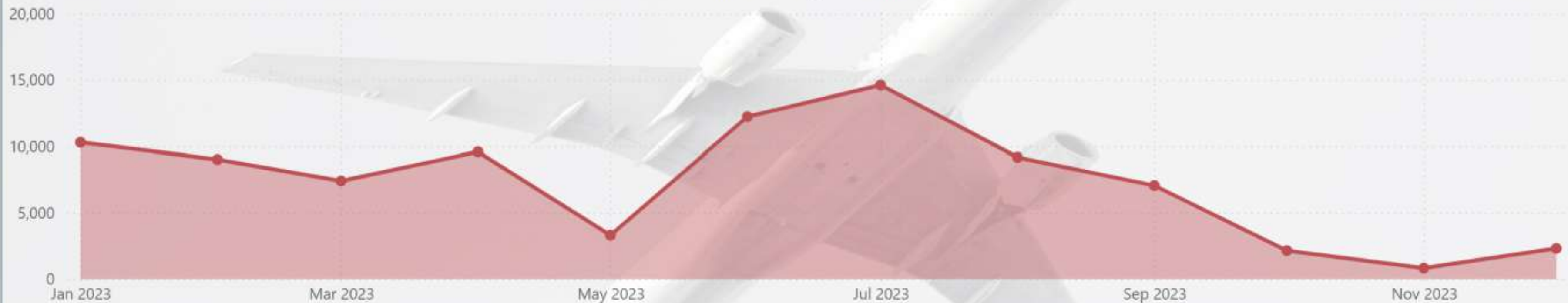
Southwest Airlines Co.

Airline with most cancellation

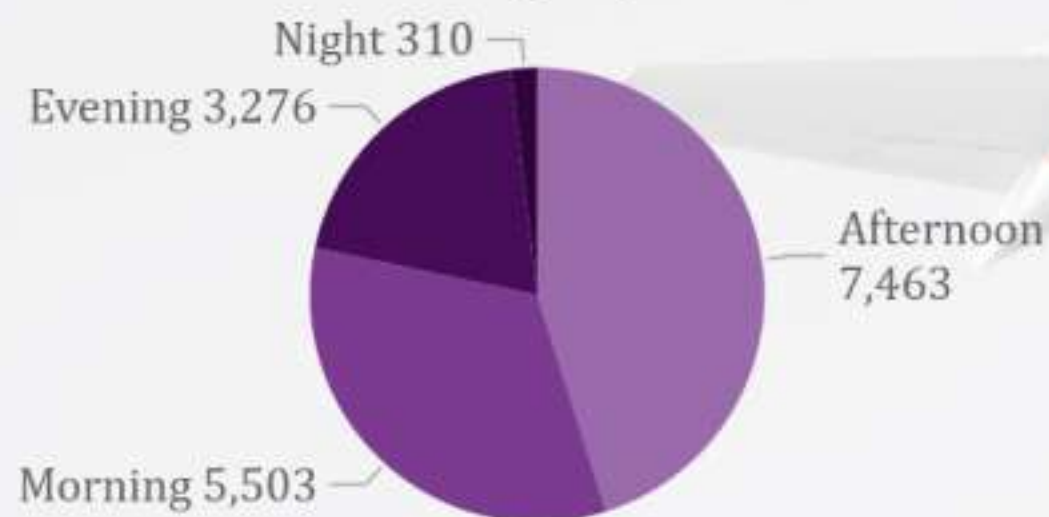
Cancelled Flights Count

Diverted Flights Count

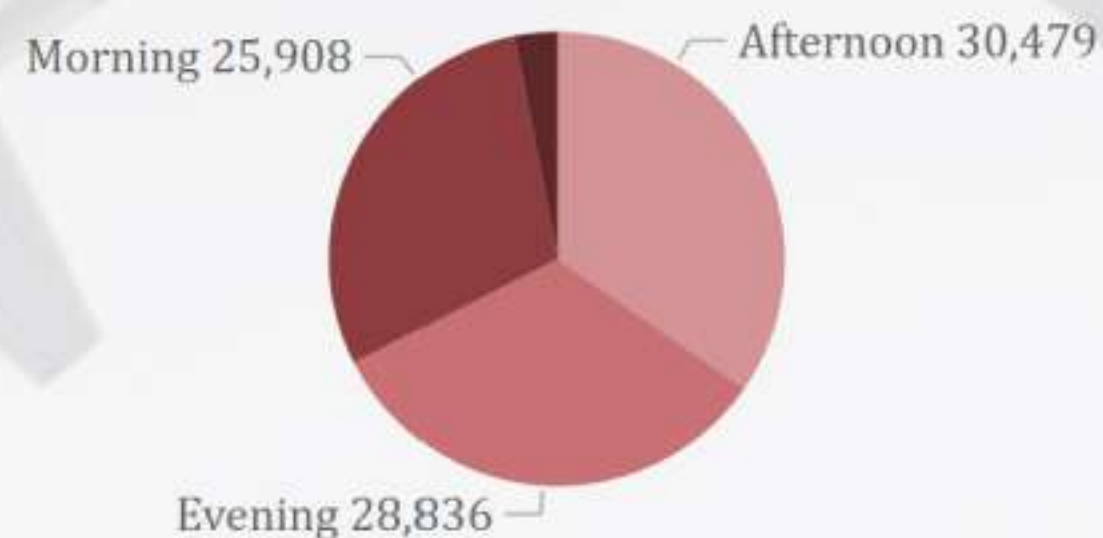
Cancelled Flights Count



Diverted Flights per Shift



Cancelled Flights per Shift



Maximum Cancellation Data

Maximum Diverted Data

Cancellation/Diversion Dashboard

Part 2

CANCELLATION AND DIVERSION DETAILS



87,936

Cancelled Flights Count

16,552

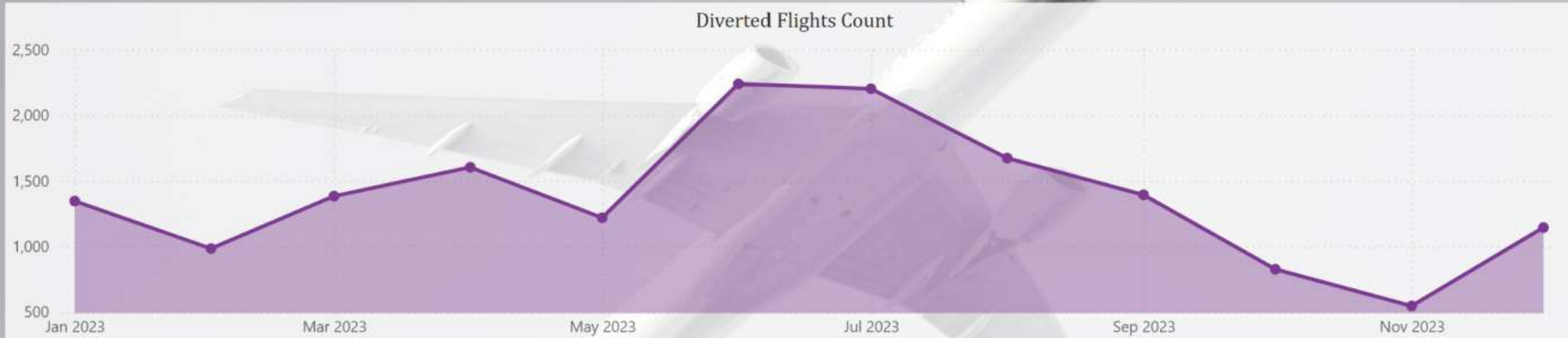
Diverted Flights Count

Southwest Airlines Co.

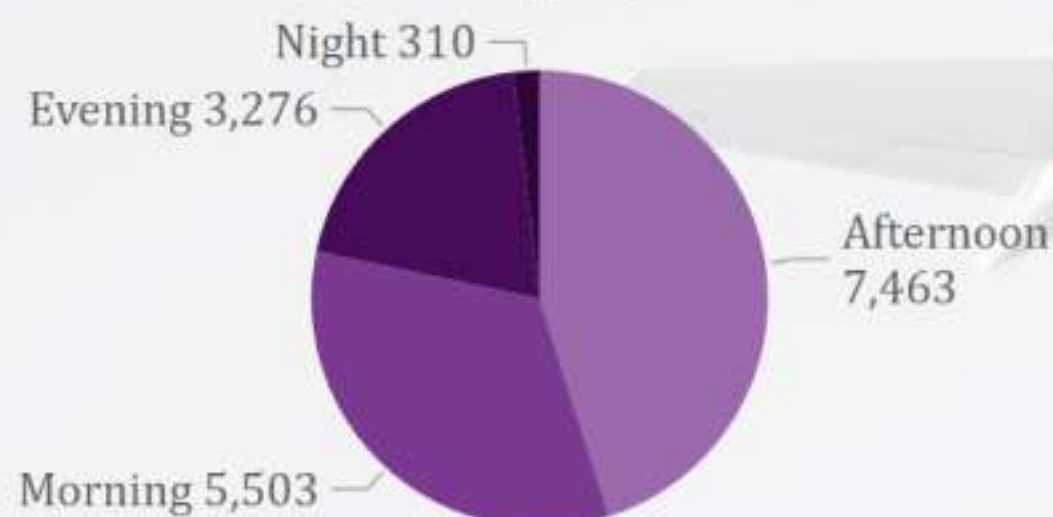
Airline with most cancellation

Cancelled Flights Count

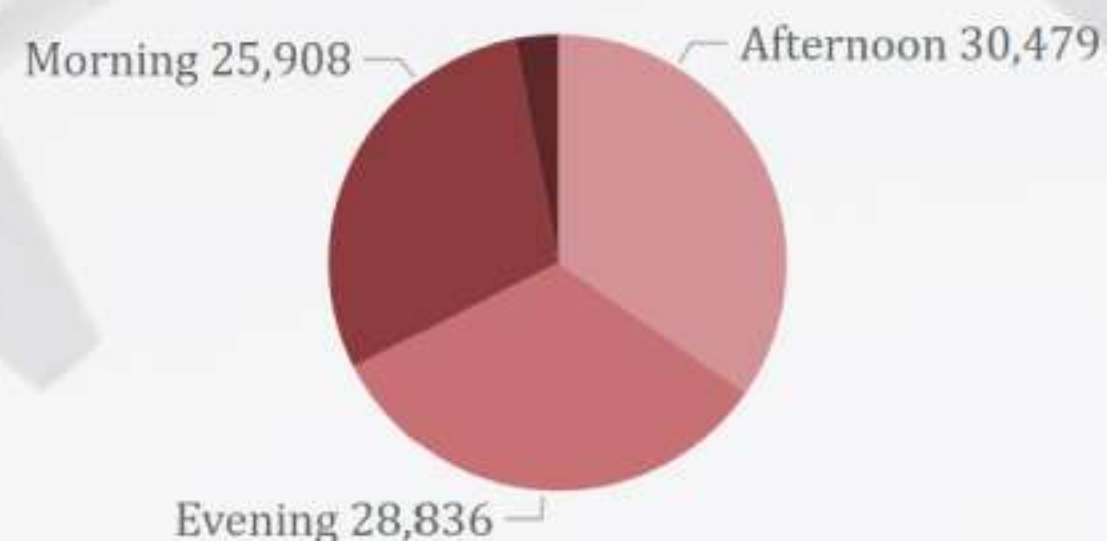
Diverted Flights Count



Diverted Flights per Shift



Cancelled Flights per Shift



Maximum Cancellation Data

Maximum Diverted Data

Cancellation/Diversion Dashboard

Part 3



CANCELLATION AND DIVERSION DETAILS

87,936

Cancelled Flights Count

16,552

Diverted Flights Count

Southwest Airlines Co.

Airline with most cancellation

Cancelled Flights Count

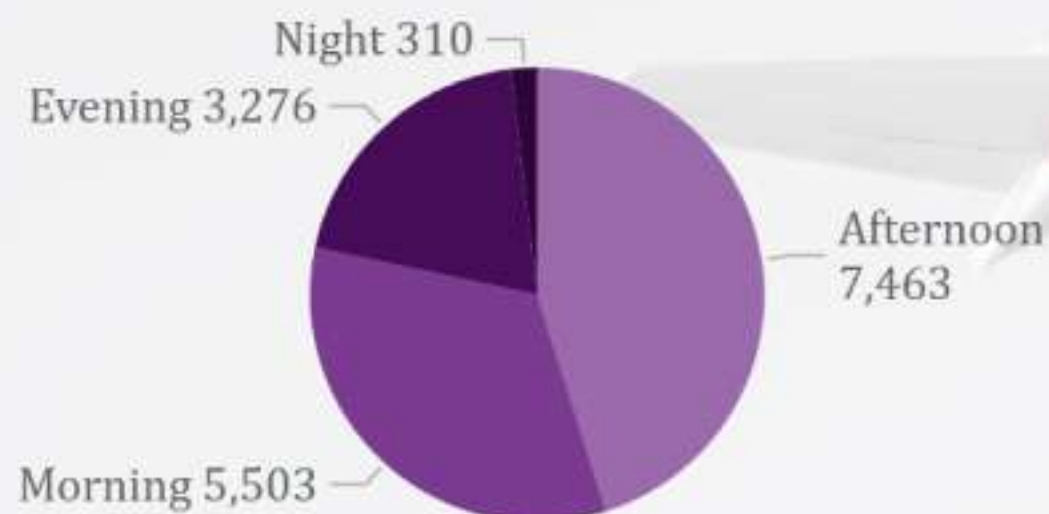
Diverted Flights Count



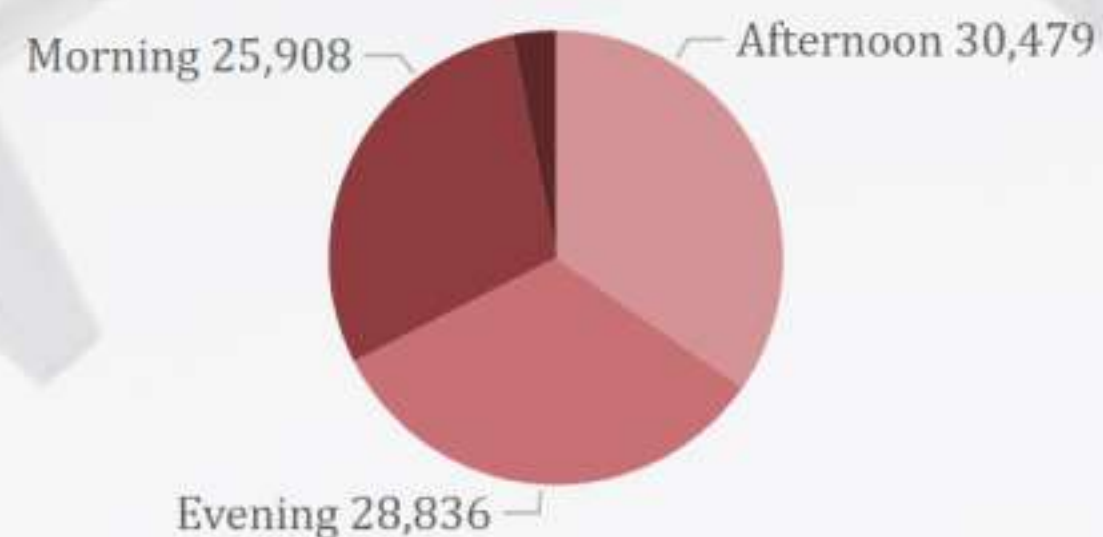
Cancelled Flights Count



Diverted Flights per Shift



Cancelled Flights per Shift

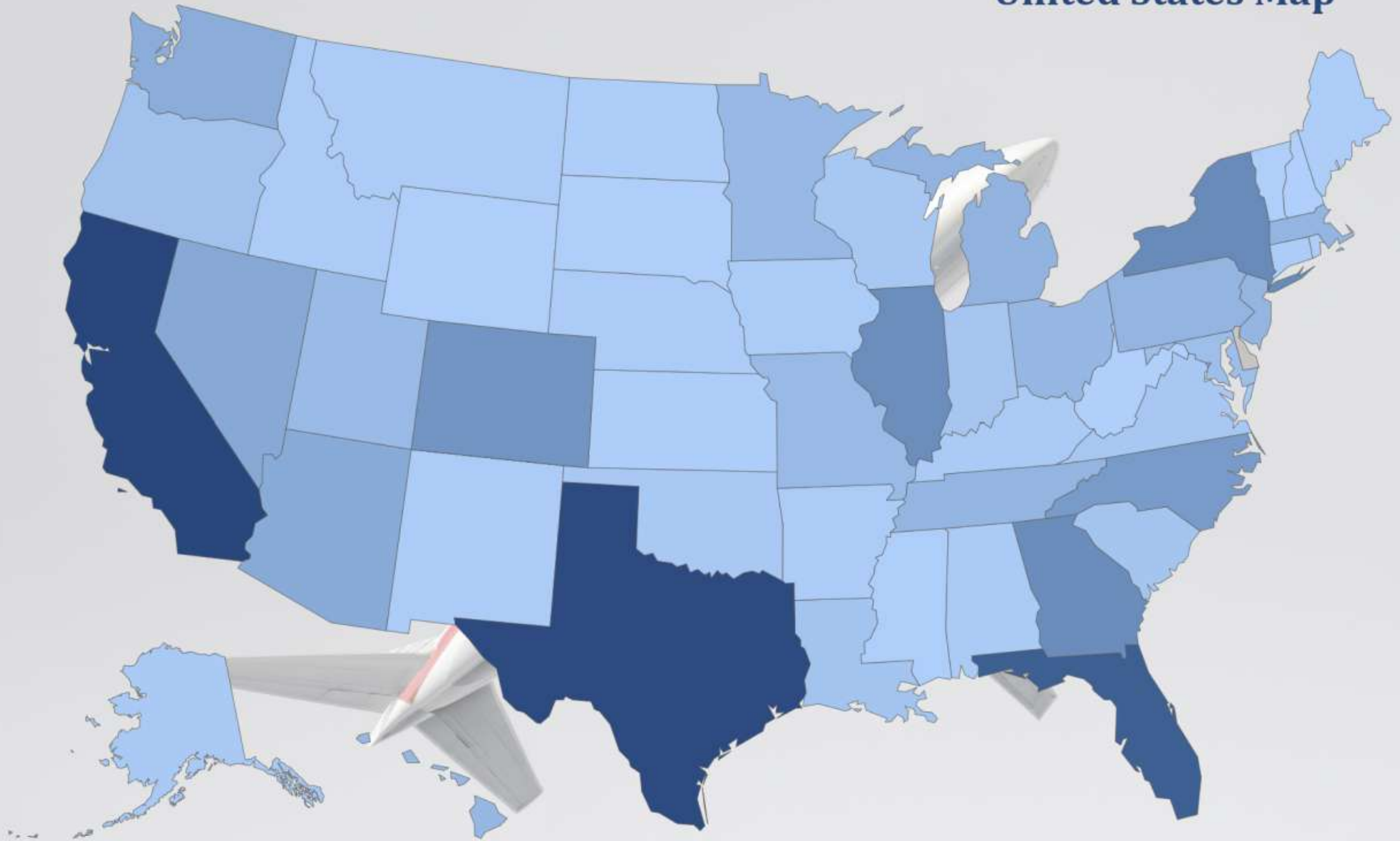


Maximum Cancellation Data

Maximum Diverted Data

Map

United States Map



State Dashboard Part 1



Colorado

STATE DETAILS

8.59

Average Temp (°C)

11.27

Wind Speed (km/h)

1,015.9

Pressure (hPa)

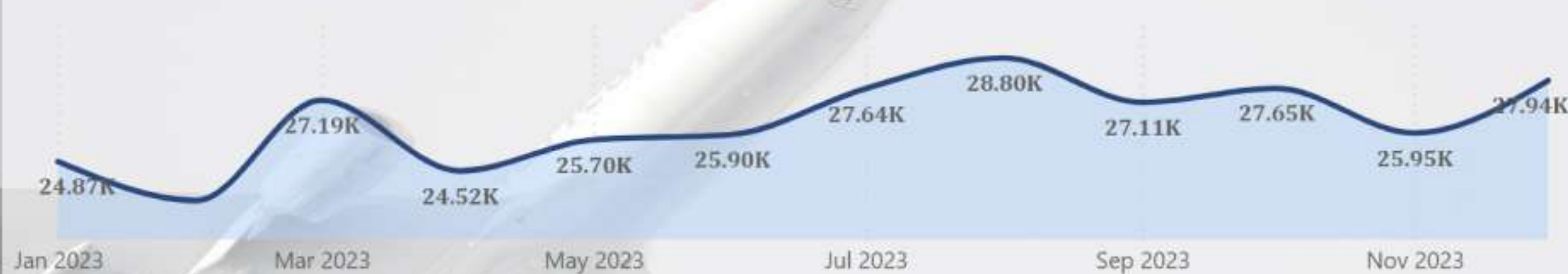
1.14

Precipitation (mm)

Monthly Flight Record

Month	Current	Previous	Monthly Diff.
February, 2023	23,392	24,868	-1,476
March, 2023	27,193	23,392	3,801
April, 2023	24,517	27,193	-2,676
May, 2023	25,696	24,517	1,179
June, 2023	25,895	25,696	199
July, 2023	27,635	25,895	1,740
August, 2023	28,796	27,635	1,161
September, 2023	27,109	28,796	-1,687
October, 2023	27,649	27,109	540
November, 2023	25,949	27,649	-1,700
December, 2023	27,939	25,949	1,990

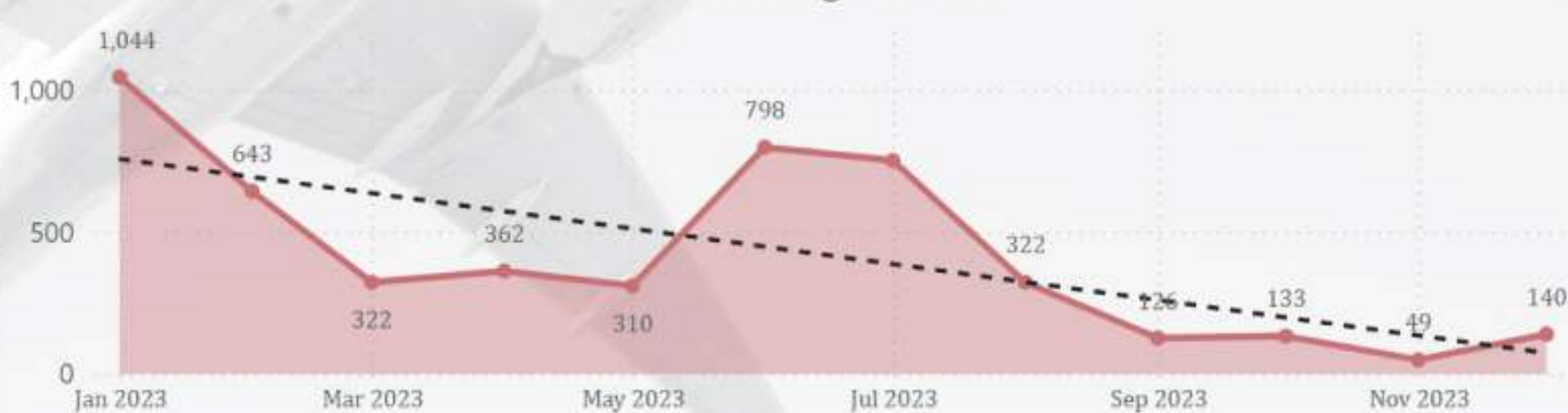
Total Flights



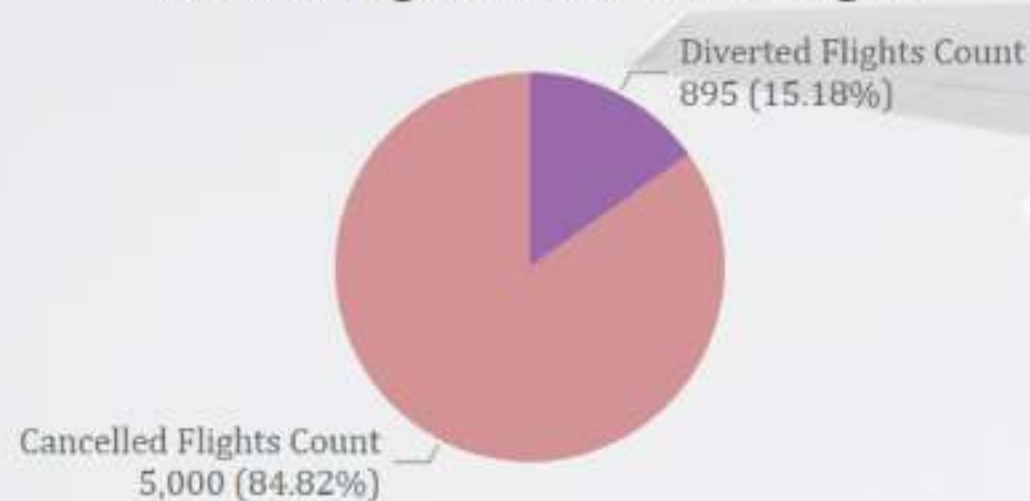
Cancelled Flights Count

Diverted Flights Count

Cancelled Flights Count



Diverted Flights vs Cancelled Flights



3,16,638

Total Flights

5,895

Total Cancellation/Diversion

Next year flight target



Next year cancellation target



State Dashboard Part 2



Colorado

STATE DETAILS

8.59

Average Temp (°C)

11.27

Wind Speed (km/h)

1,015.9

Pressure (hPa)

1.14

Precipitation (mm)

Monthly Flight Record

Month	Current	Previous	Monthly Diff.
February, 2023	23,392	24,868	-1,476
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October, 2023	27,649	27,109	540
November, 2023	25,949	27,649	-1,700
December, 2023	27,939	25,949	1,990

Total Flights



June, 2023

Cancelled Flights Count 798

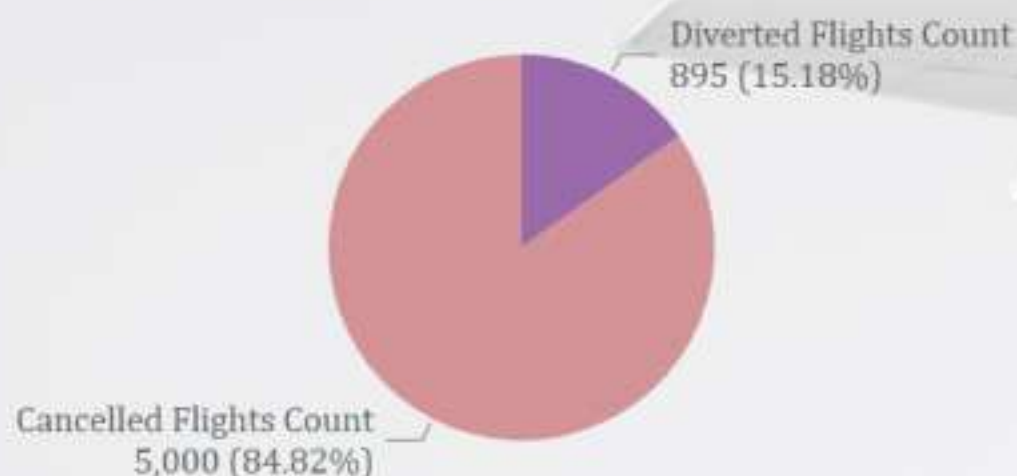
Drill up

Drill down

Cancelled Flights Count

Diverted Flights Count

Diverted Flights vs Cancelled Flights



3,16,638

Total Flights

5,895

Total Cancellation/Diversion

Next year flight target



Next year cancellation target





Thank You