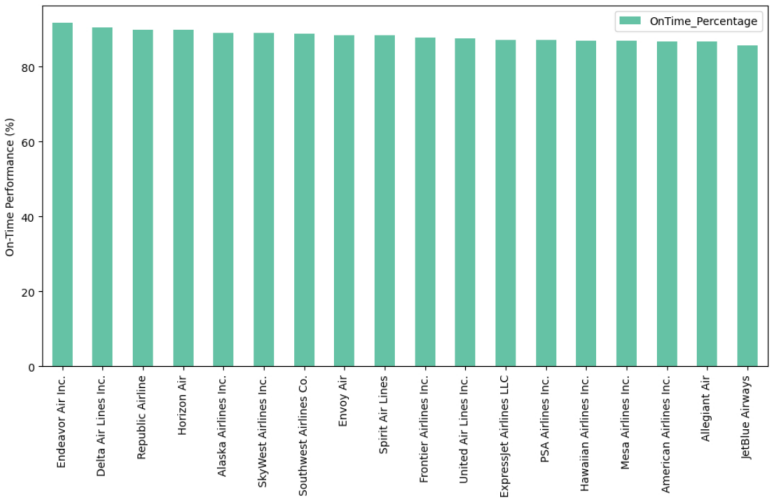
Flight analysis

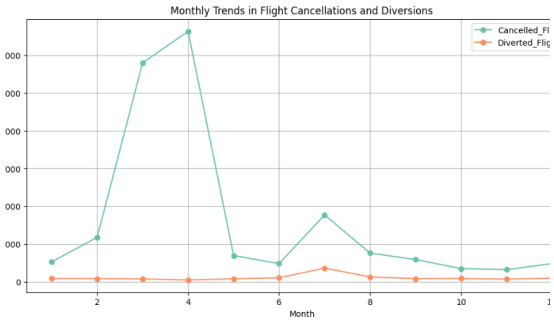
This project aimed to analyse and visualise various aspects of flight performance and delays across different airlines, airports, and regions using Pandas, Matplotlib, and Seaborn. The goal is to provide actionable insights into flight operations, identify key factors affecting on-time performance, and explore trends and patterns in flight delays and cancellations.



This bar chart displays airlines ranked by the number of on-time arrivals. This chart allows stakeholders to quickly identify top-performing carriers.

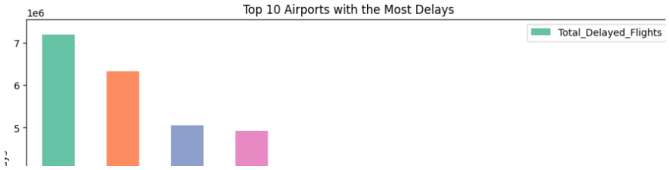
Top Airlines by On-Time Performance

This analysis focuses on evaluating the performance of airlines based on their on-time arrival rates. Data on flights are aggregated by those that arrived on time across different airlines. This helps to identify airlines that carriers consistently meet their schedules.



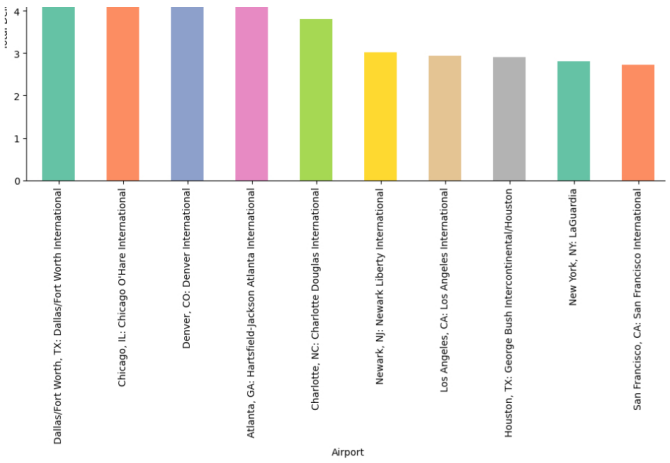
Monthly Trends in Flight Cancellations and Diversions

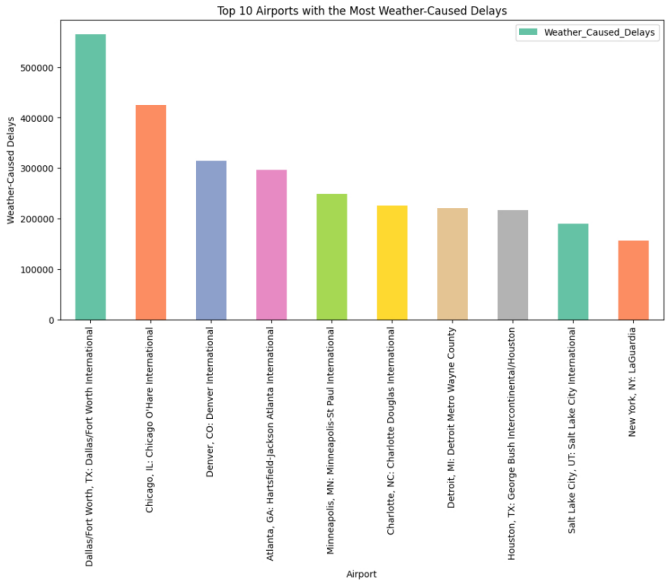
This analysis examines the trends in flight cancellations and diversions for certain months in a period. It identifies peak months for flight cancellations and diversions. Understanding these trends helps to assess the stability and reliability of flight operations over time.



Airports with the Most Delays

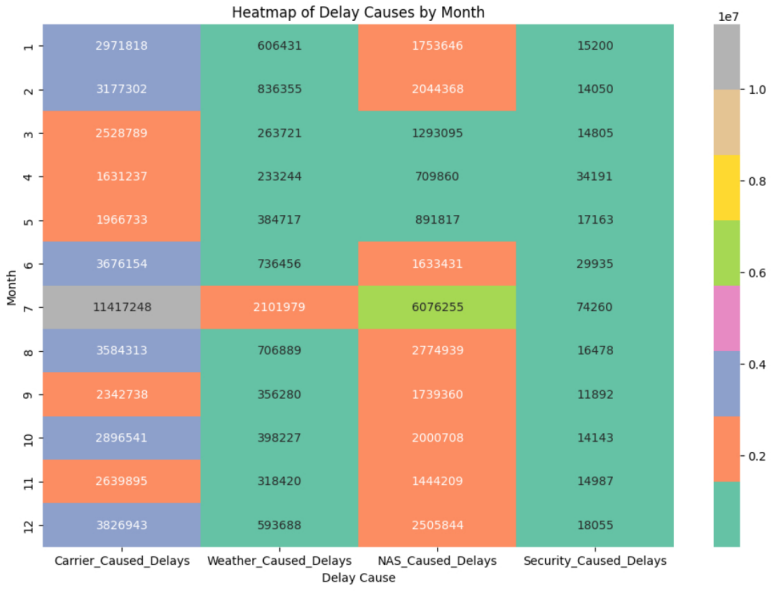
This analysis investigates which airports experience the most delays and highlights airports with the highest number of delays. Dallas Airport had the most delayed number of flights.





Impact of Weather on Delays by Airport

This analysis explores how weather conditions affect flight delays across the airports in different regions. By correlating weather-related delays with geographical locations, the impact of adverse weather on flight operations can be assessed. The delay in the Dallas airport from the previous analysis was caused by weather. Flight delays at the Salt Lake City airport were caused by weather.



Heatmap of Delay Causes by Month

This heatmap visualises the distribution of different delay causes across months. It provides a comprehensive view of how various factors contribute to delays over time. It shows the intensity of delays by month and delay cause.