

VISUALIZATION #1: AIRLINE & AIRPORT DELAY ANALYSIS

Objective: Analyze which airlines or airports experience the most significant delays. Determine delay-prone destinations and evaluate potential aggregates for performance evaluation.

Link: [Airline Delay Overview Dashboard](#)

Summary: The visualization provides an in-depth analysis of airline delays. Notably, Spirit Airlines demonstrates a significant delay issue compared to its peers. A deeper route-specific analysis reveals particular routes, like the one between Philadelphia International Airport and Myrtle Beach International Airport, that disproportionately affect the airline's overall delay statistics.

Design Approach: A Bar Chart was utilized for the Airline Performance Snapshot to enable straightforward airline comparisons. A Scatter Plot for the Route-Specific Delay Analysis showcases correlations between departure and arrival delays.

Resources: Kaggle 2015 Flight Dataset

VISUALIZATION #2: UNDERSTANDING DELAY CAUSES

Objective: Identify the primary causes of delays to strategize and reduce them. Examine if these reasons fluctuate by airport or season.

Link: [Delay Causes Analysis Dashboard](#)

Summary: June's primary delay culprit was Late Aircraft Delays, followed by Airline and Air System Delays. For effective delay mitigation, airlines must address late aircraft issues, optimize internal operations, and potentially implement flexible weather scheduling.

Design Approach: A stacked bar chart was selected to concurrently showcase total and individual delay causes. A color-blind palette ensures the data's accessibility and clarity for all viewers.

Resources: Kaggle 2015 Flight Dataset

VISUALIZATION #3: INSIGHTS INTO FLIGHT CANCELLATIONS

Objective: Determine the airports with the most cancellations and identify the prevalent reasons behind these cancellations.

Link: [Flight Cancellation Insights Dashboard](#)

Summary: Weather-induced cancellations dominate at Dallas/Fort Worth International Airport (DFW), as showcased by 231 cancellations. DFW ranks high among the most cancellation-affected airports, emphasizing the region's potential weather susceptibility.

Design Approach: A map visualization grants a spatial perspective, allowing for intuitive pattern recognition and airport localization.

Resources: Kaggle 2015 Flight Dataset