**US Commercial Aviation Analysis**

**Problem Definition:** Evaluate US commercial flight delays in 2015 by airline, airport, and route. We will focus on the following aspects:

* Identify the most and least reliable airlines in terms of on-time departures
* Analyze overall flight volume variations over time (month, week, and day)
* Identify the airports and routes with the highest average delays
* Investigate the most common reasons for delays and evaluate their trends over time

**Data Source:** U.S. Department Of Transportation Air Travel Consumer Report - Airline Flight Delays in 2015 dataset. Direct access link here (and the download link here).

**Motivation:** According to AirHelp (2023), the economic impact of air travel disruptions is estimated to be $67.5 billion globally, half of which is borne by airlines and passengers in the US alone. With rising concerns about the reliability and punctuality of the aviation industry in the US, conducting an analysis of flight delays is essential to enhance air travel efficiency and passenger satisfaction. This analysis will allow us to understand trends, challenges, and opportunities for optimizing air travel for airlines and passengers alike.