



Airport Authority Data Analysis

BY

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Introduction



Dataset:

Sourced from Kaggle's Airline Delay and Cancellation Data (2009-2018).



Key Areas of Focus & Target Audience:

The key metrics for this analysis were the total number of flights, delays, and ground processing times and most importantly the analysis of proxy satisfaction score. The target audience for this presentation is management of the Airport Authority



What we want to achieve:

Create an interactive, user-friendly dashboard for exploring these metrics that could offer insights for airport management.

Objectives



Analyse total amount of flights, flight delays, ground processing time and passenger feedback from 2014 to 2018;



Create user friendly clear and concise dashboard that is easy to navigate by using filtering options that the user could apply

Methodology



DATA COLLECTION



GETTING TO KNOW
THE DATASET



DATA CLEANING

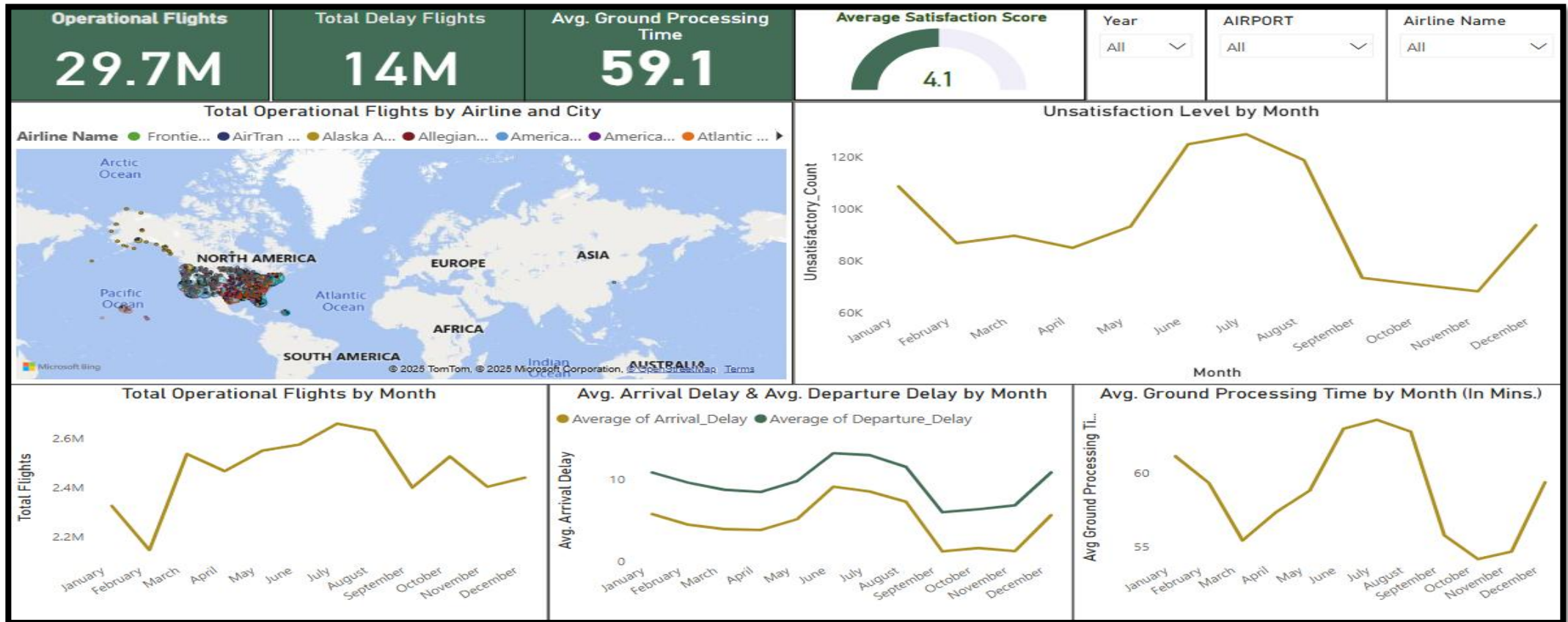


DATA
TRANSFORMATION

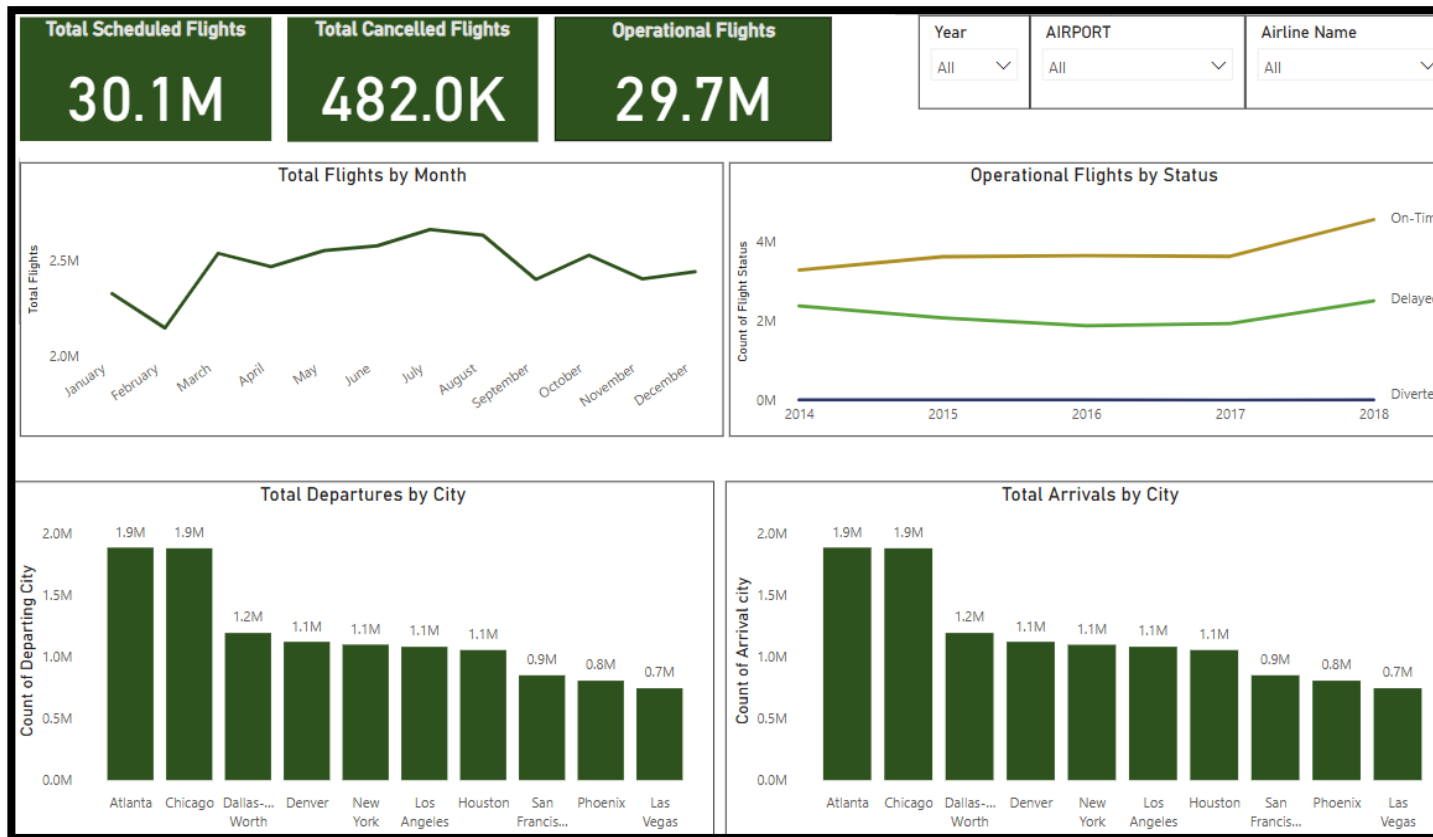


DASHBOARD
DEVELOPMENT

Performance Overview

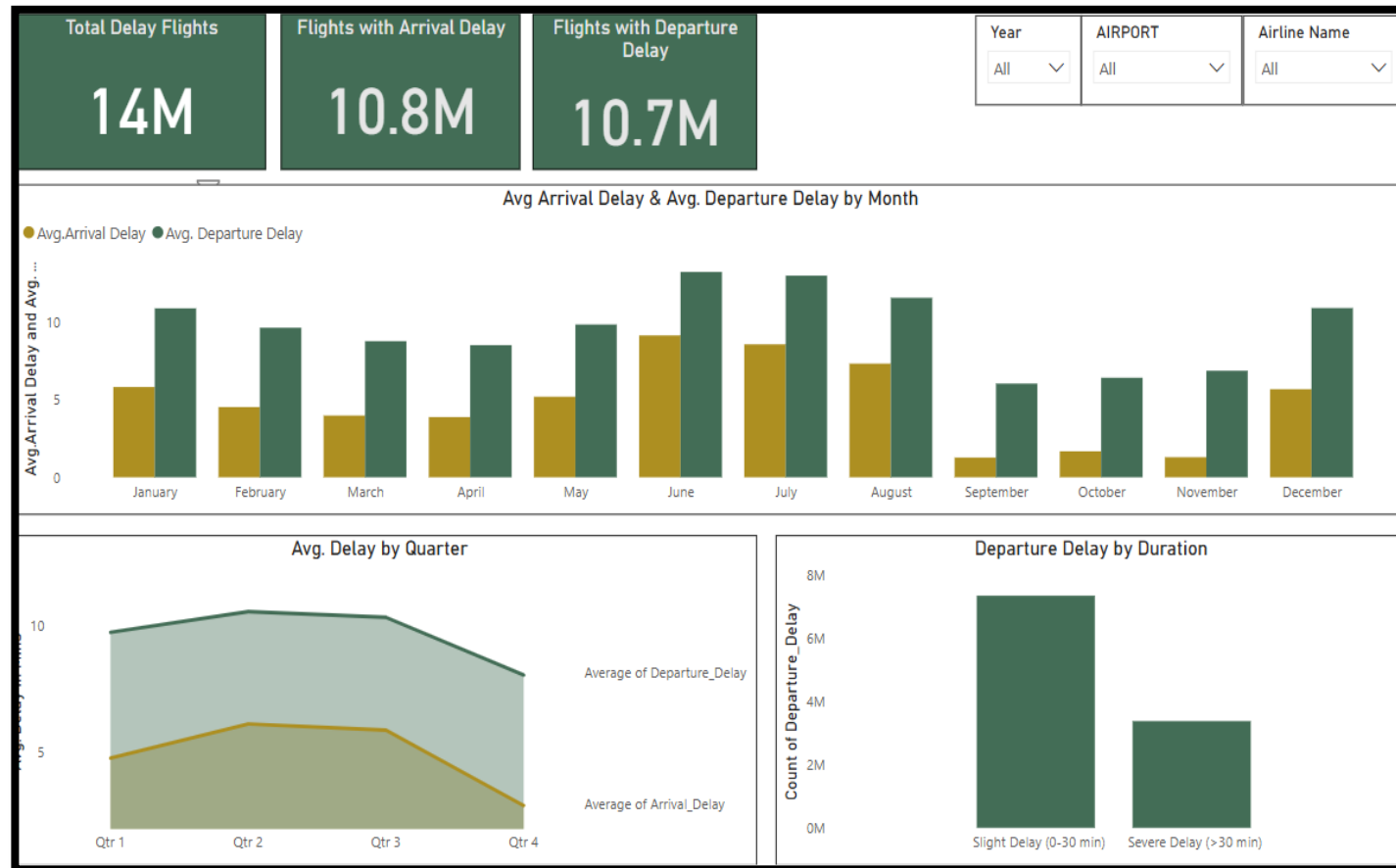


Total Number of Flights Analysis



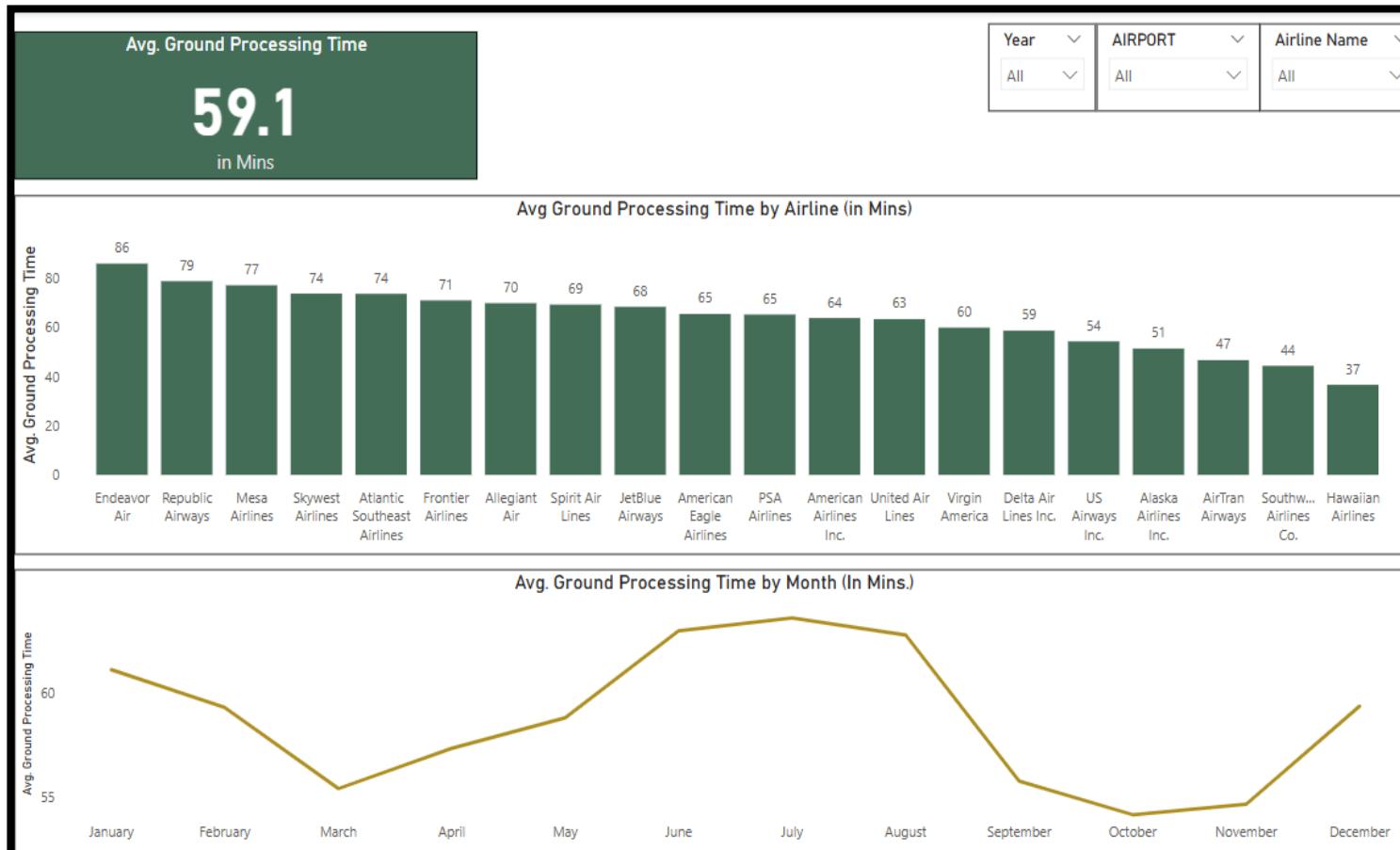
- Total Operational Flights soared in 2018
- According to Forbes report, the growth in the number of flights may be driven by the expansion of route networks by various airlines.

The Total Number of Flight Delays



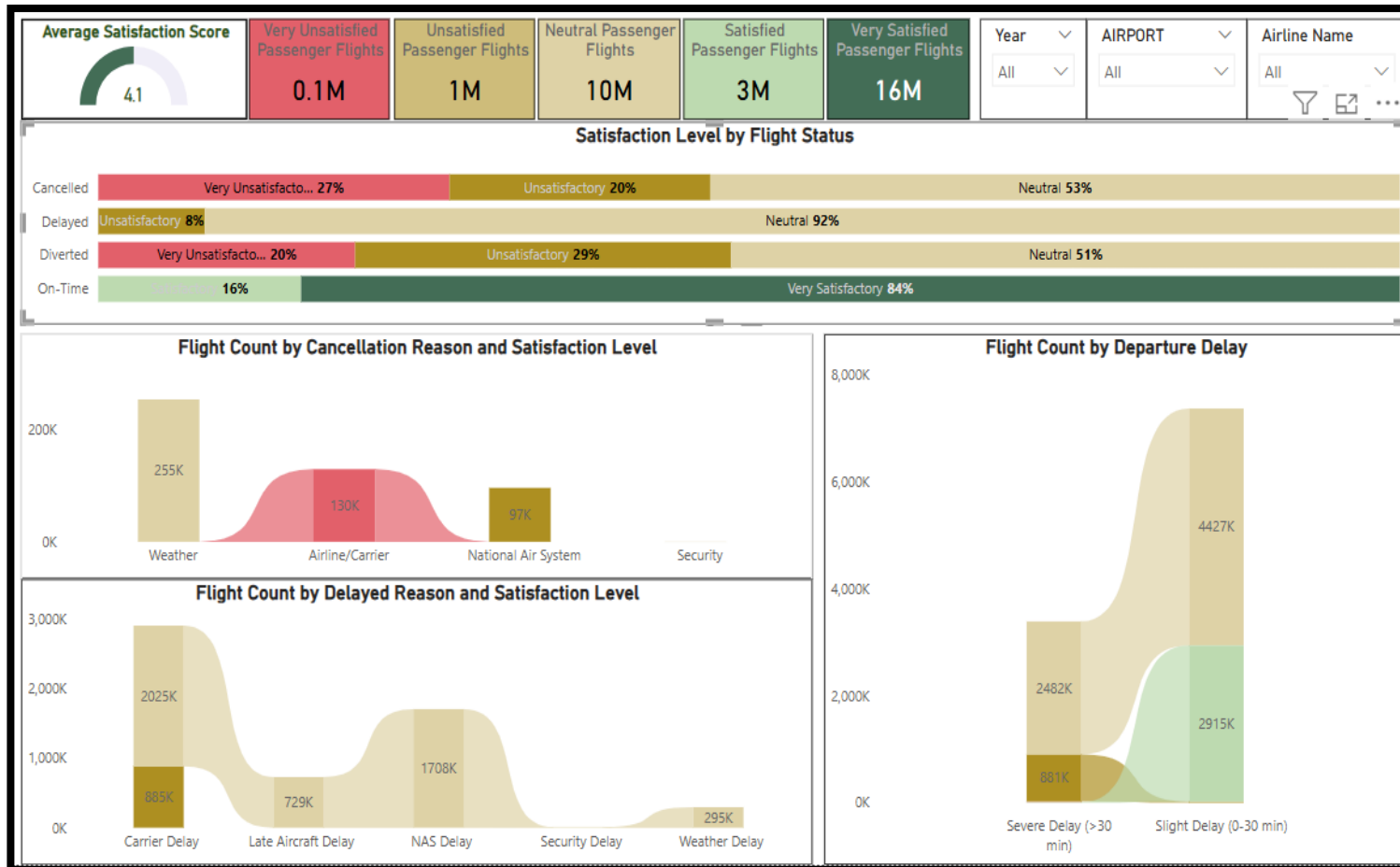
- Flight delays peaked during summer and Christmas vacations

Ground Processing Time



- Ground processing time meets industry standards

Satisfaction score



- Airline-related cancellations & delays resulted in the lowest satisfaction scores.
- Flights delayed by over 30 minutes had significantly lower satisfaction scores than slightly delayed flights.

Challenges

- Integrating 5-year Data into one Table
- Preparing Big Data for Analysis
- Missing values in the dataset
- Confusion in ground processing time calculation
- No direct passenger feedback in the dataset

Key Takeaways & Next Steps

- There is a noticeable increase of number of flights in 2018 in comparison to 2014-2017
- Spikes in delays during high-traffic season
- Average ground processing time is 59.1 minutes also impacted by high traffic season
- There are a lot of factors that could impact that customer satisfaction is lower or higher, like, delays, cancellations and other factors
- Airport management should focus on optimizing operations during peak travel months

Any questions?

Thank you for your
attention!