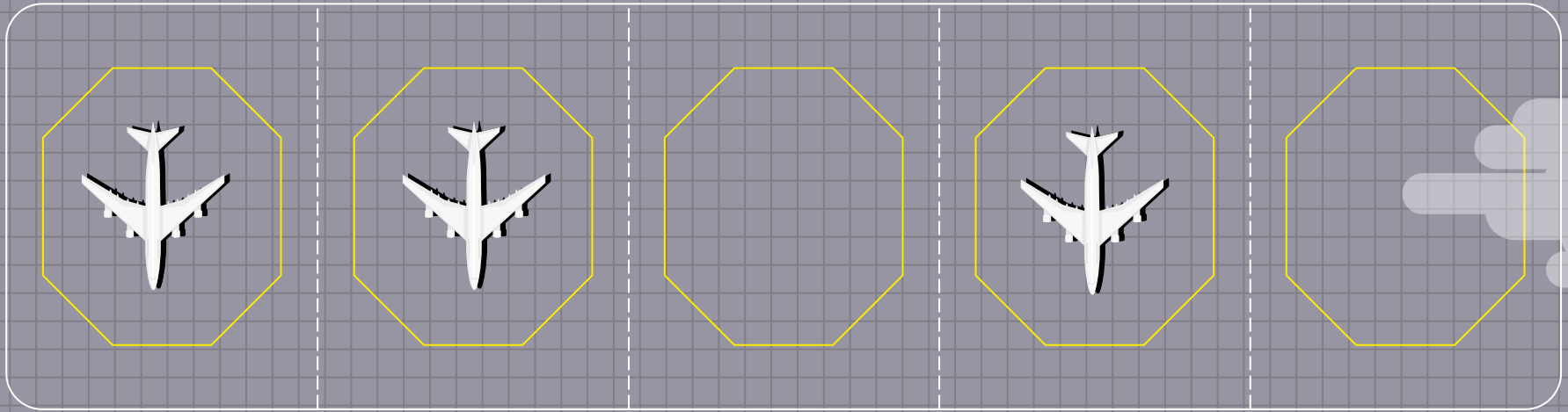


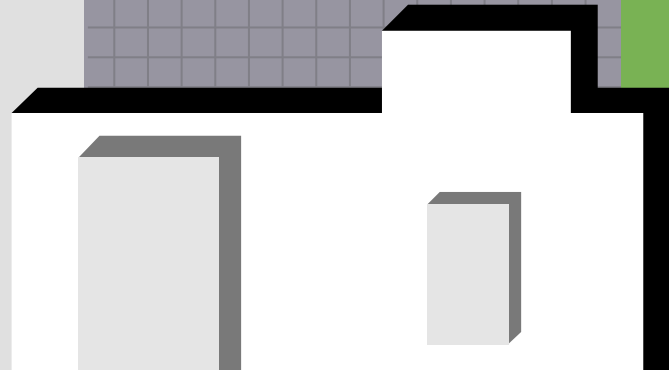
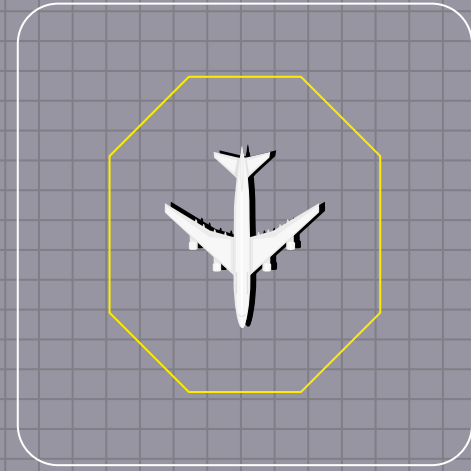
# MID-TERM PROJECT

By - Nabin & Pooja



# Objective

To Design a Model that  
can Predict the flight  
delays of first week of  
JAN,2020.



# Arrival Delays

**40.33%**

**Late Aircraft  
Delay**

**30.11%**

**Carrier Delay**

**24.00%**

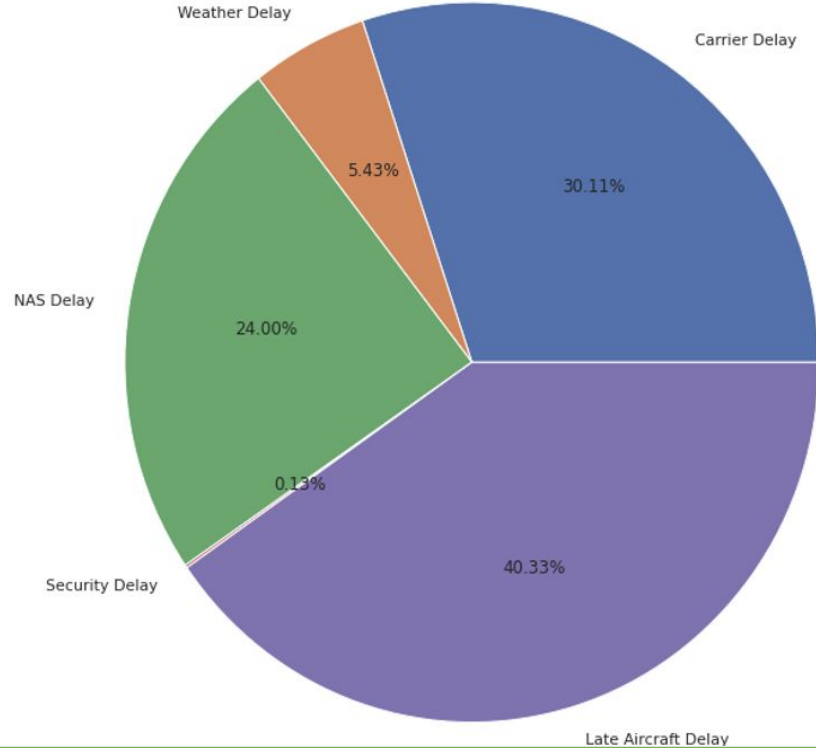
**NAS Delay**

**5.43%**

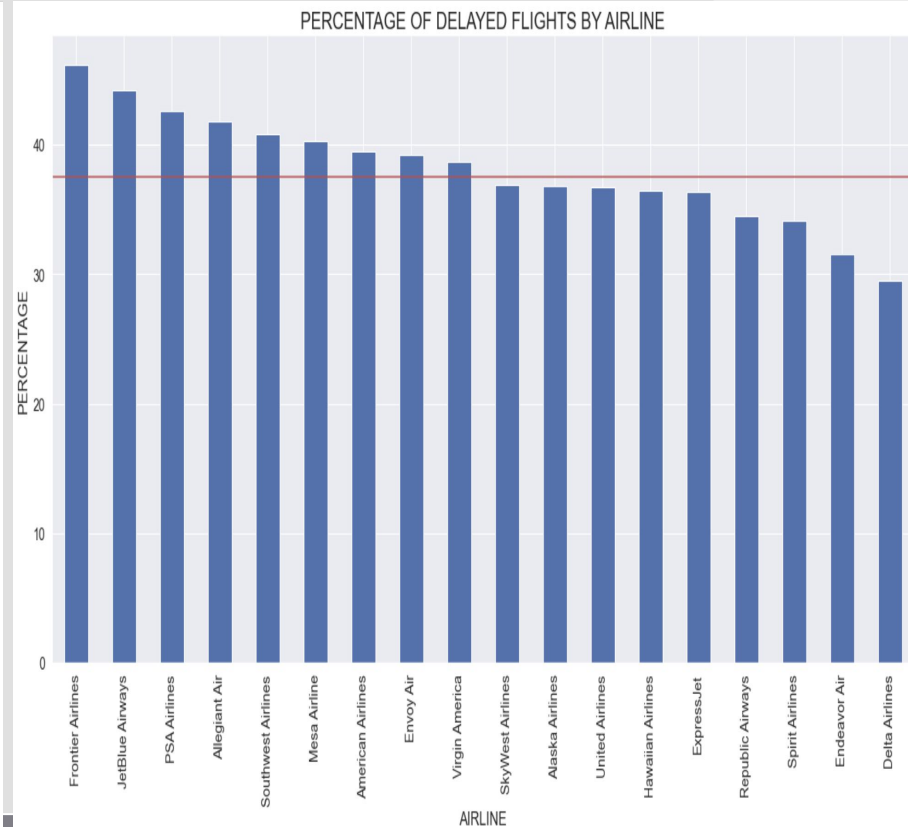
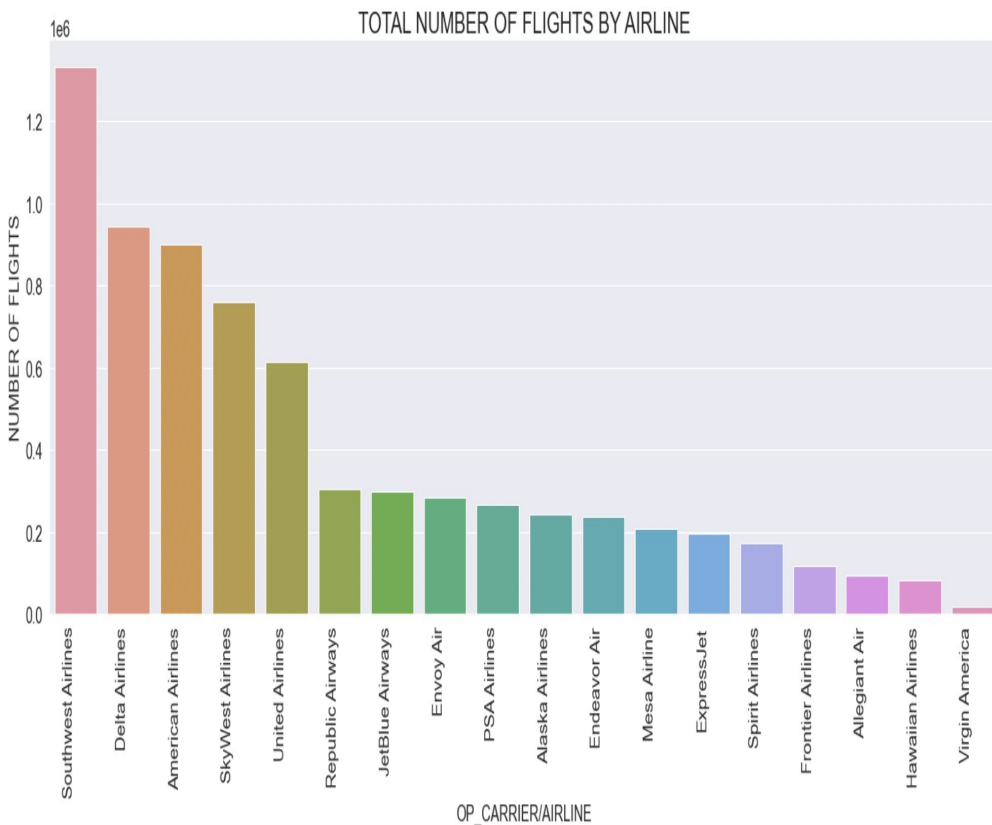
**Weather Delay**

**0.13%**

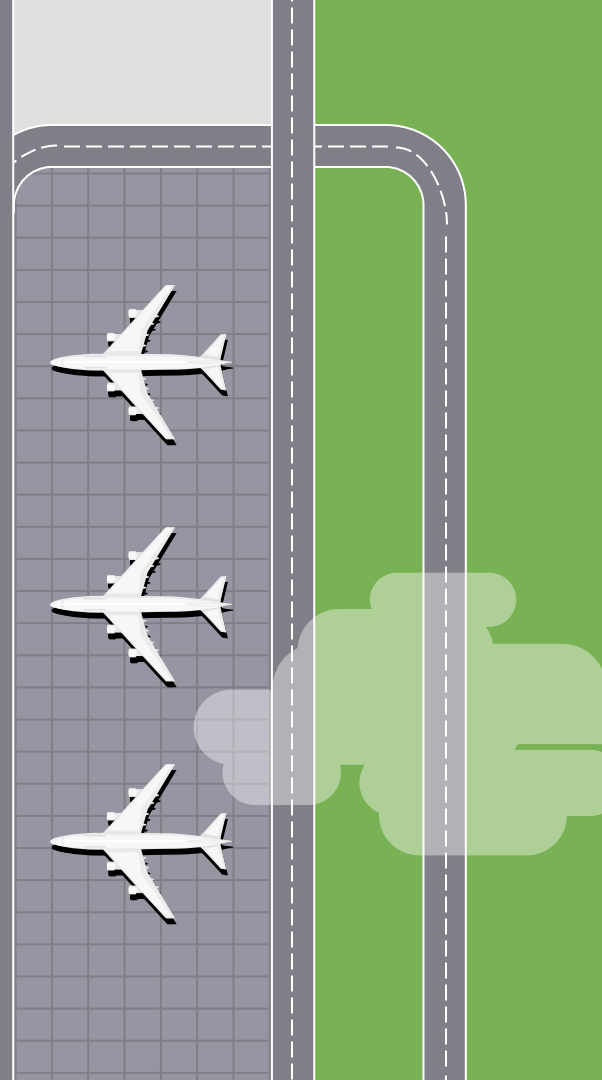
**Security Delay**



# Delays by Airline

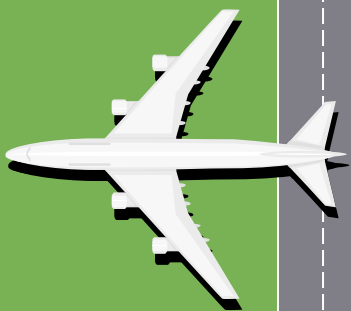
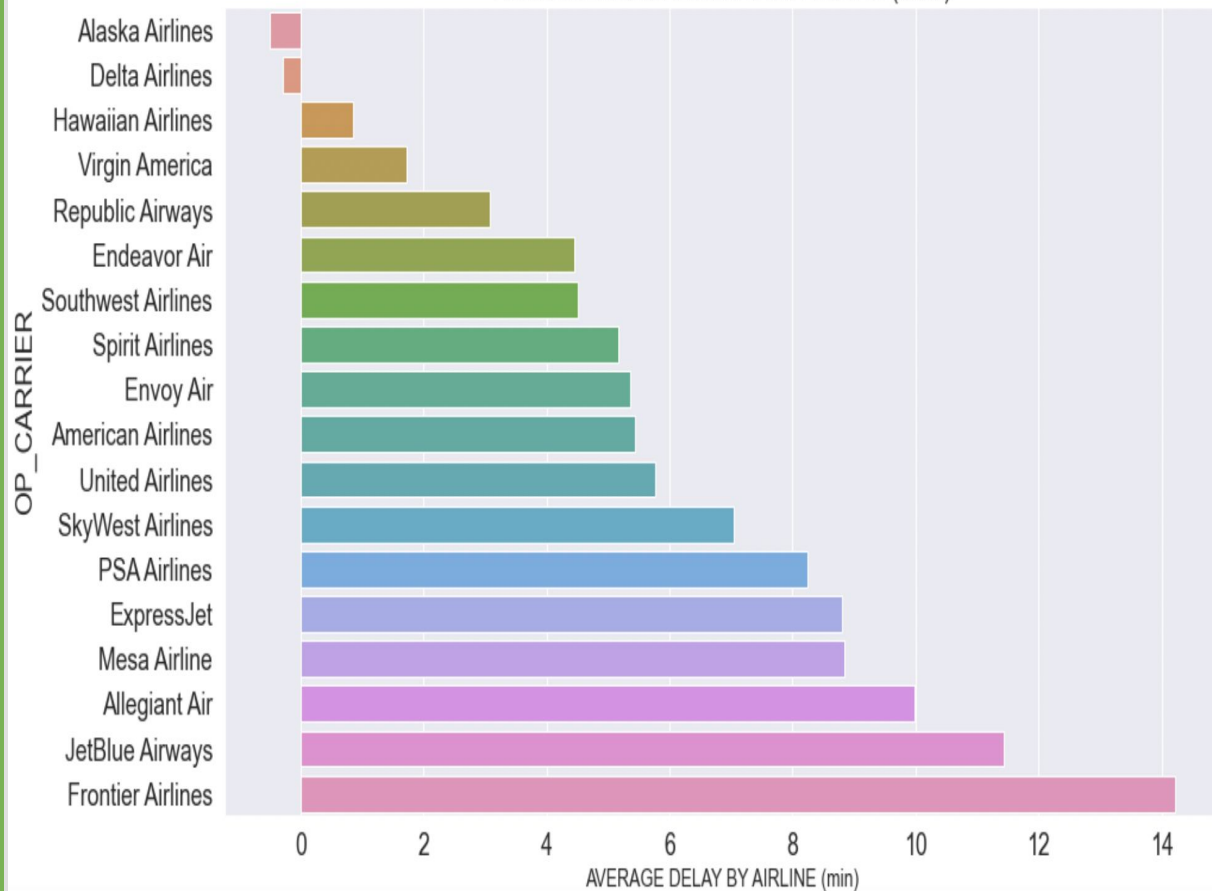


# 10 Busiest Airports

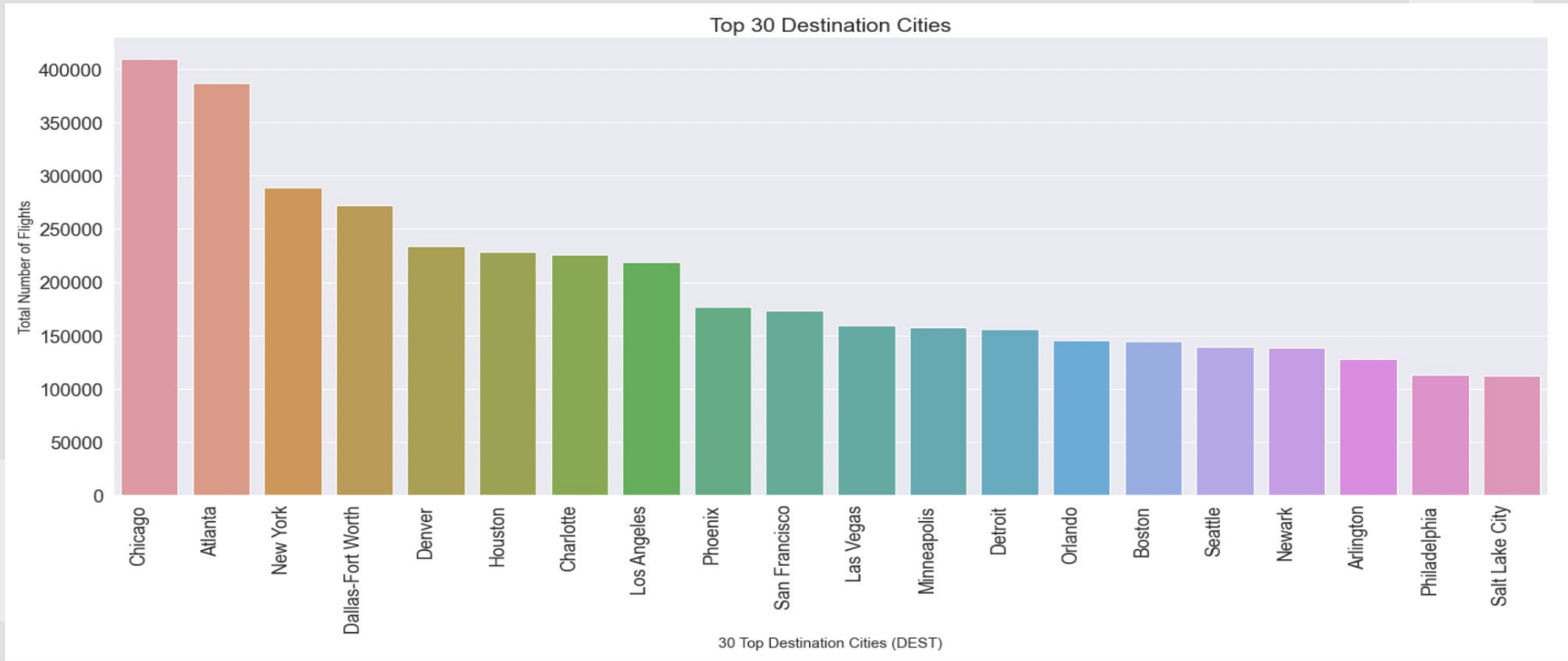


# Average Delay time per Airline

AVERAGE ARRIVAL DELAY BY AIRLINE (mins)

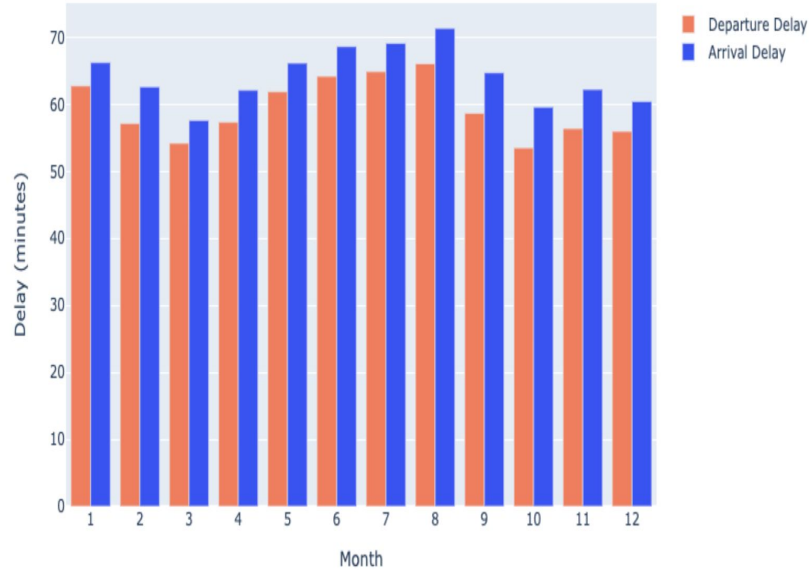


# Most Popular Destination

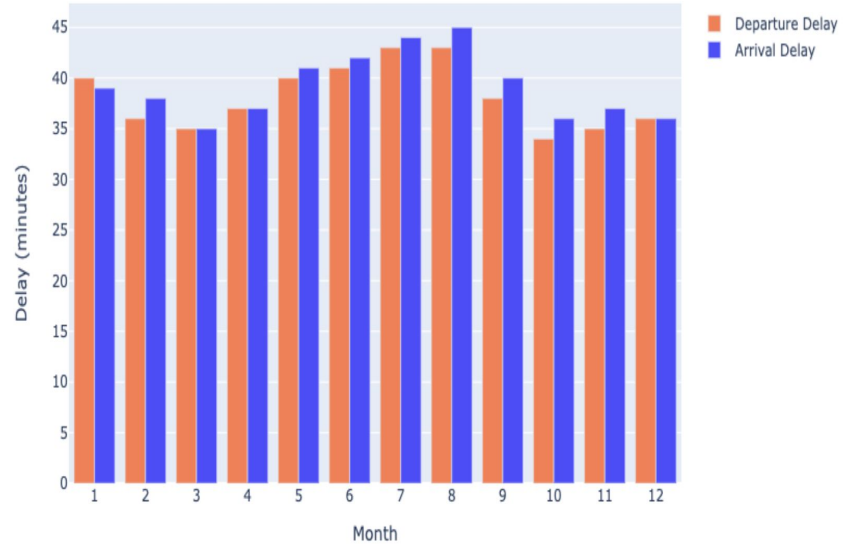


# Mean & Median Delay by Month

Mean Delay by Month



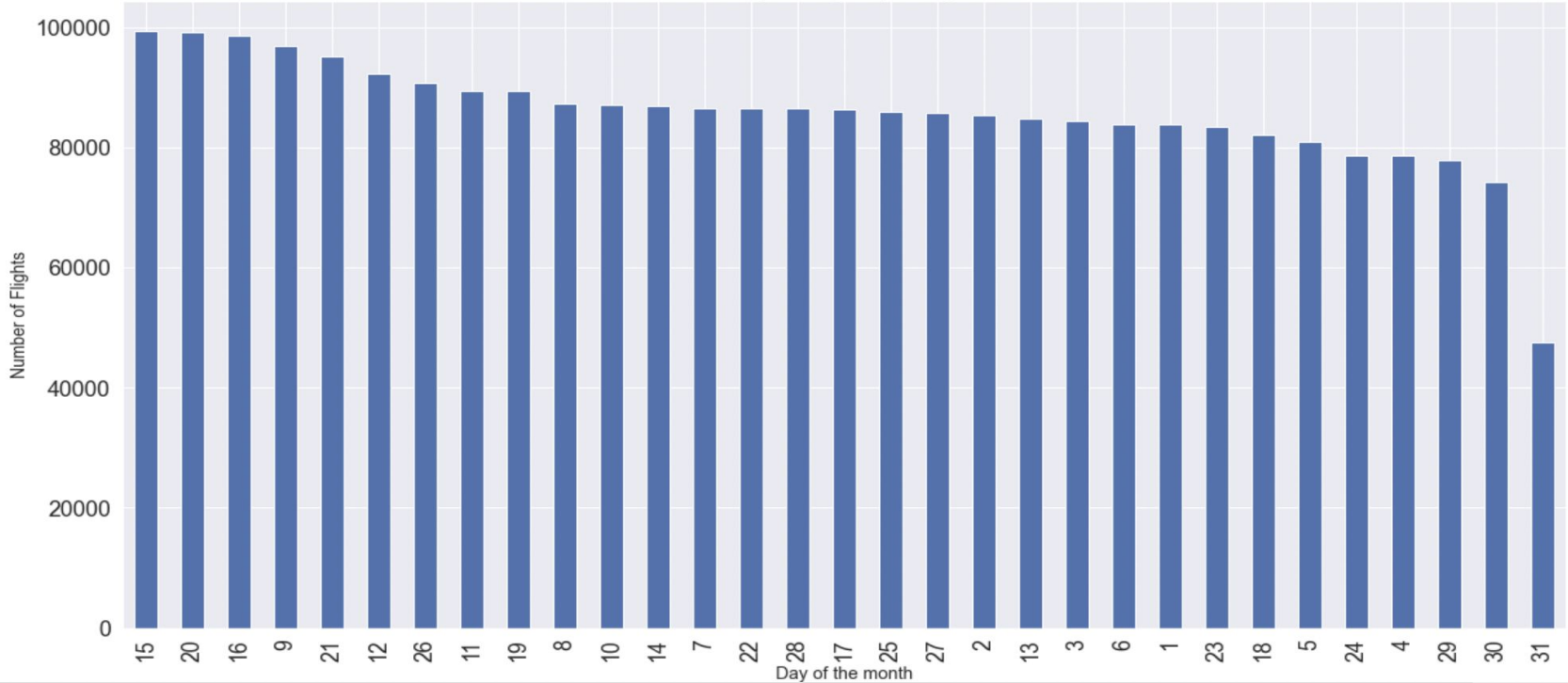
Median Delay by Month

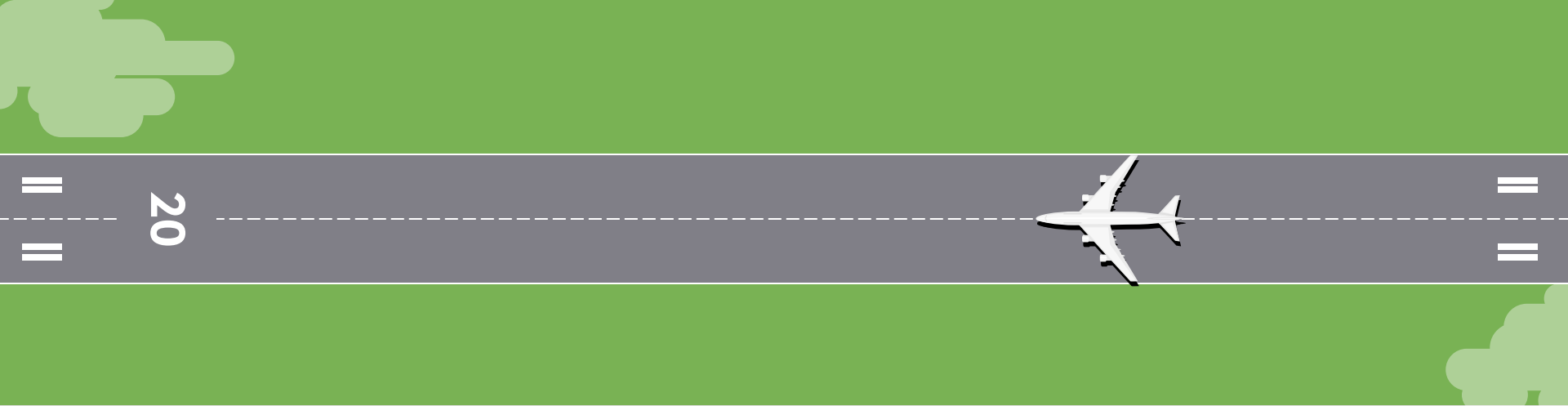




# Best Day to travel

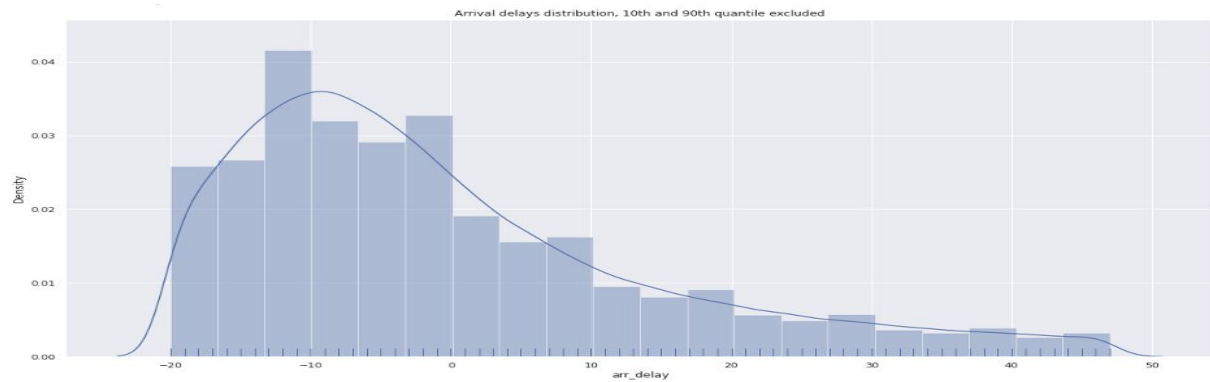
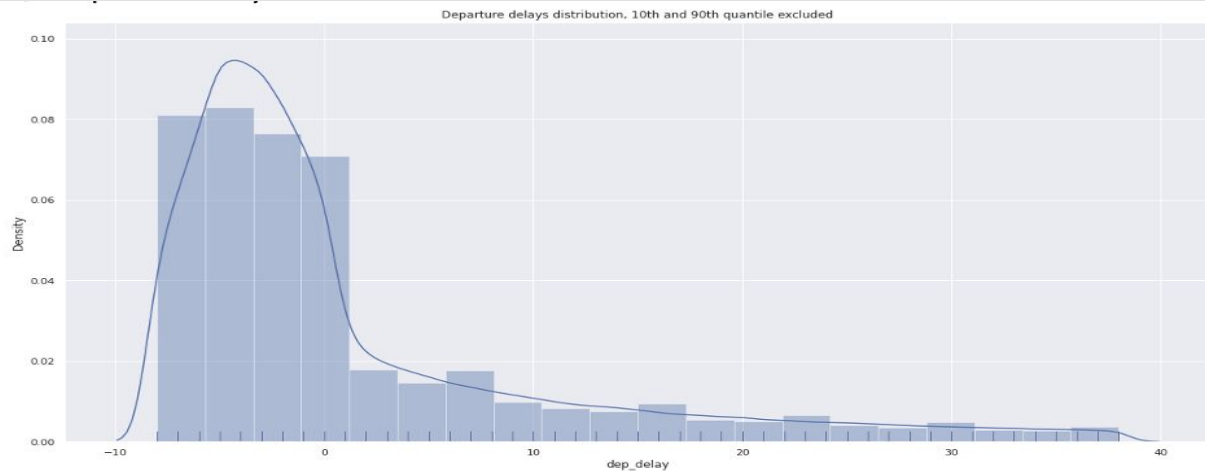
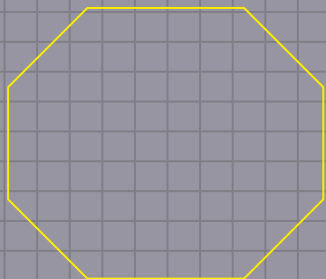
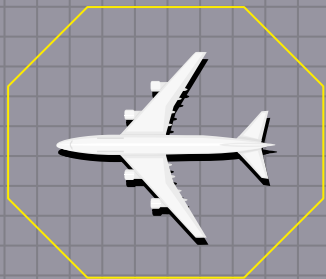
Number of Delayed Flights per day of the month



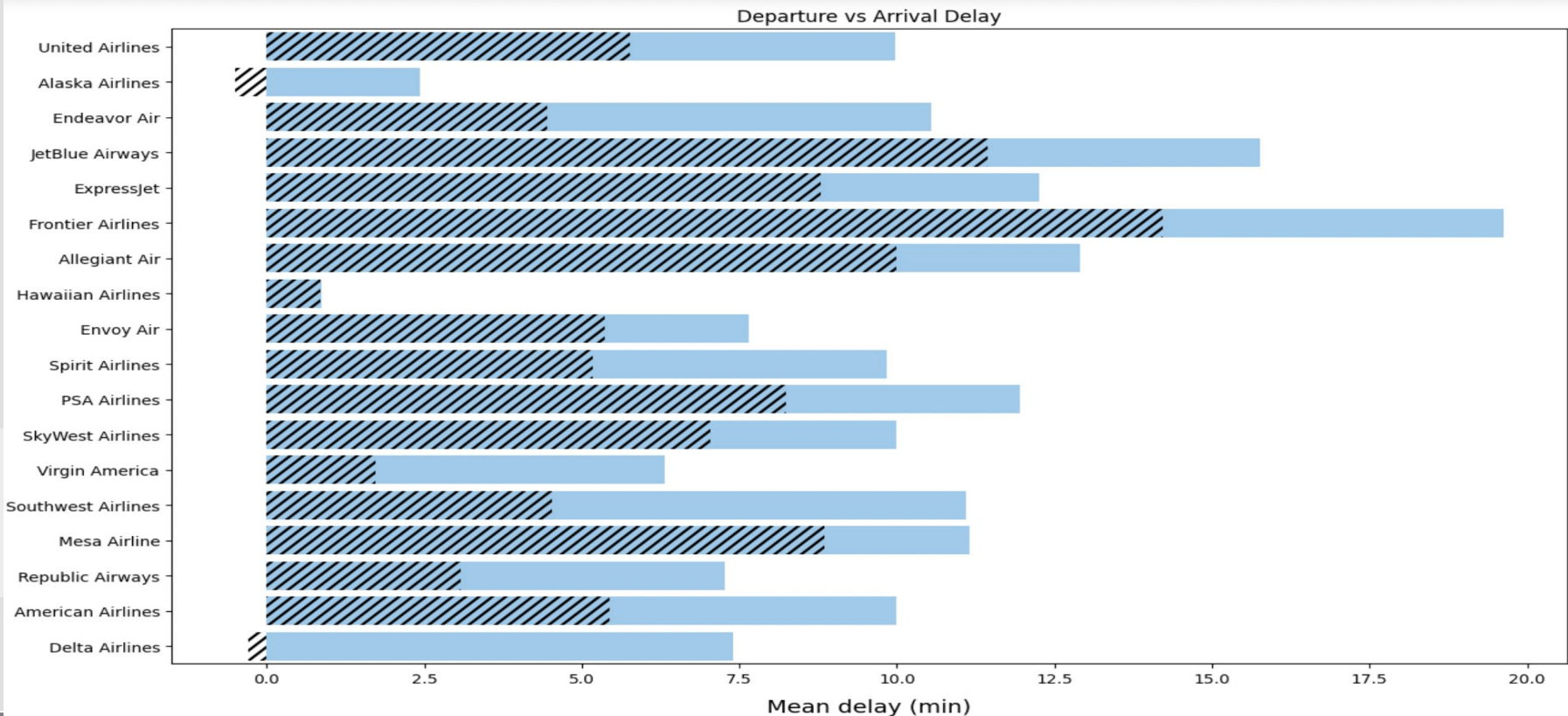


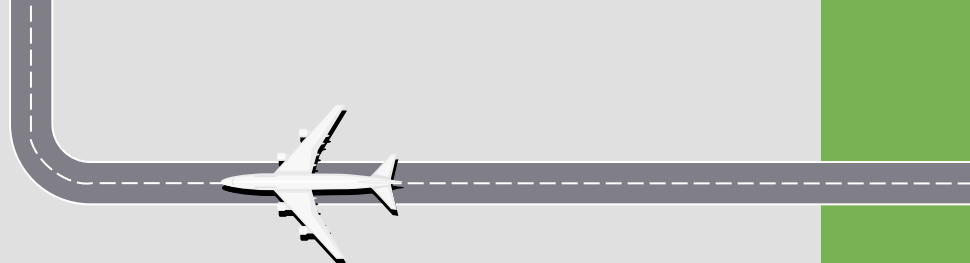
**86.20% of delayed arrivals started with a delayed departure.**

# Normal Distribution of Departure and Arrival Delays

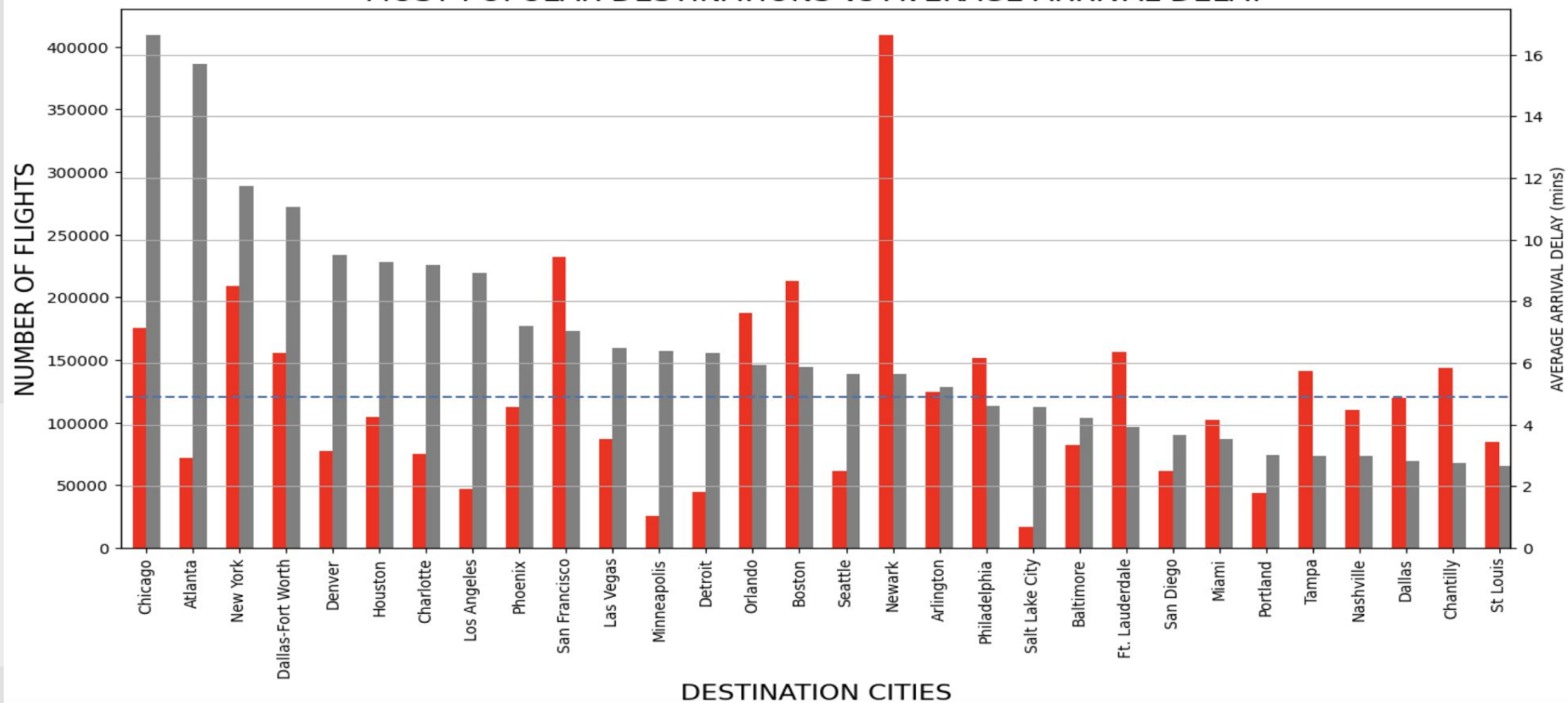


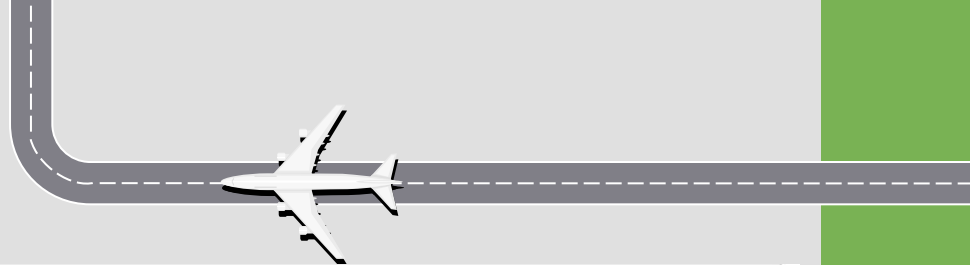
# Departure vs Arrival Delay



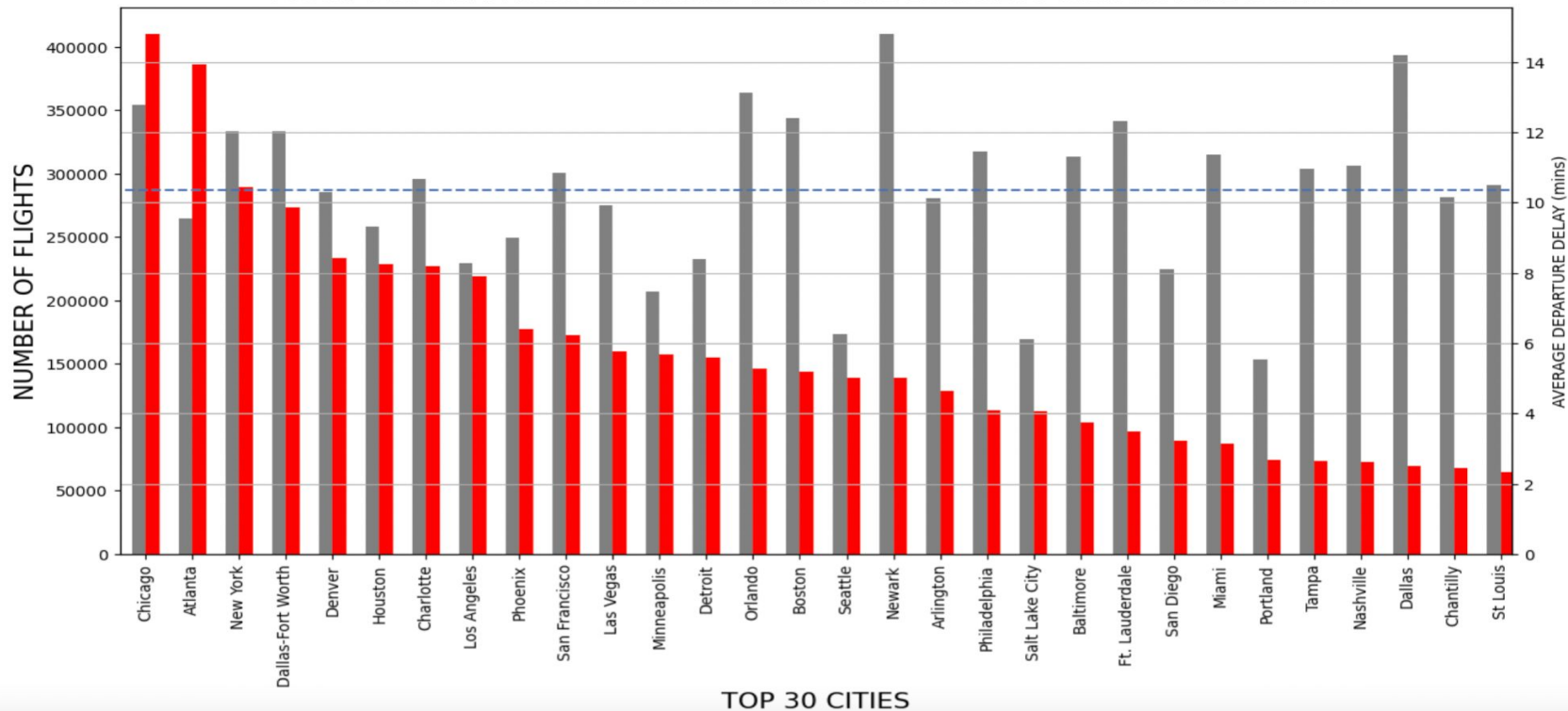


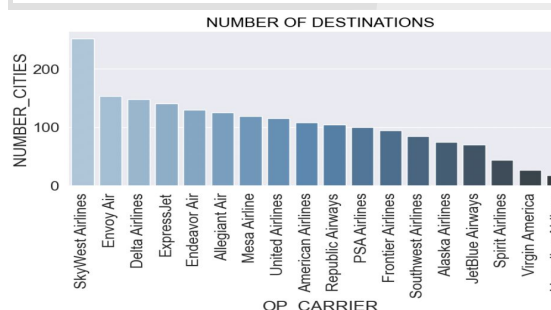
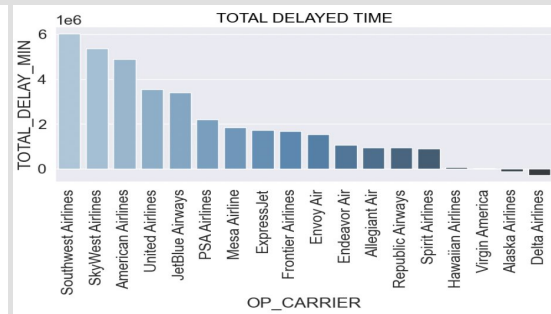
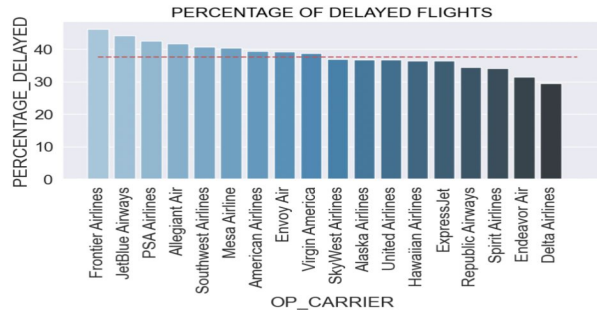
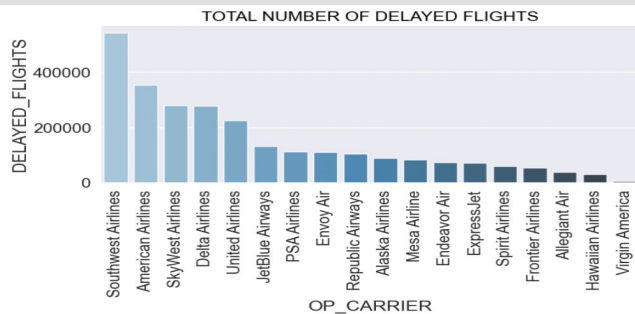
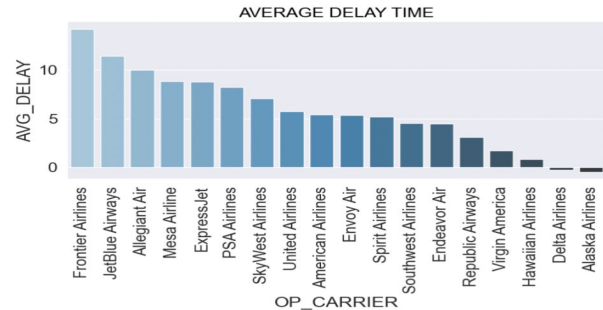
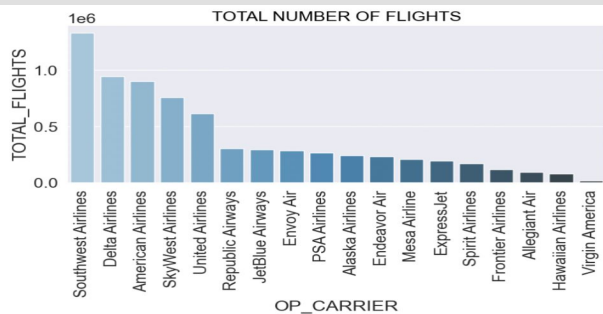
MOST POPULAR DESTINATIONS vs AVERAGE ARRIVAL DELAY

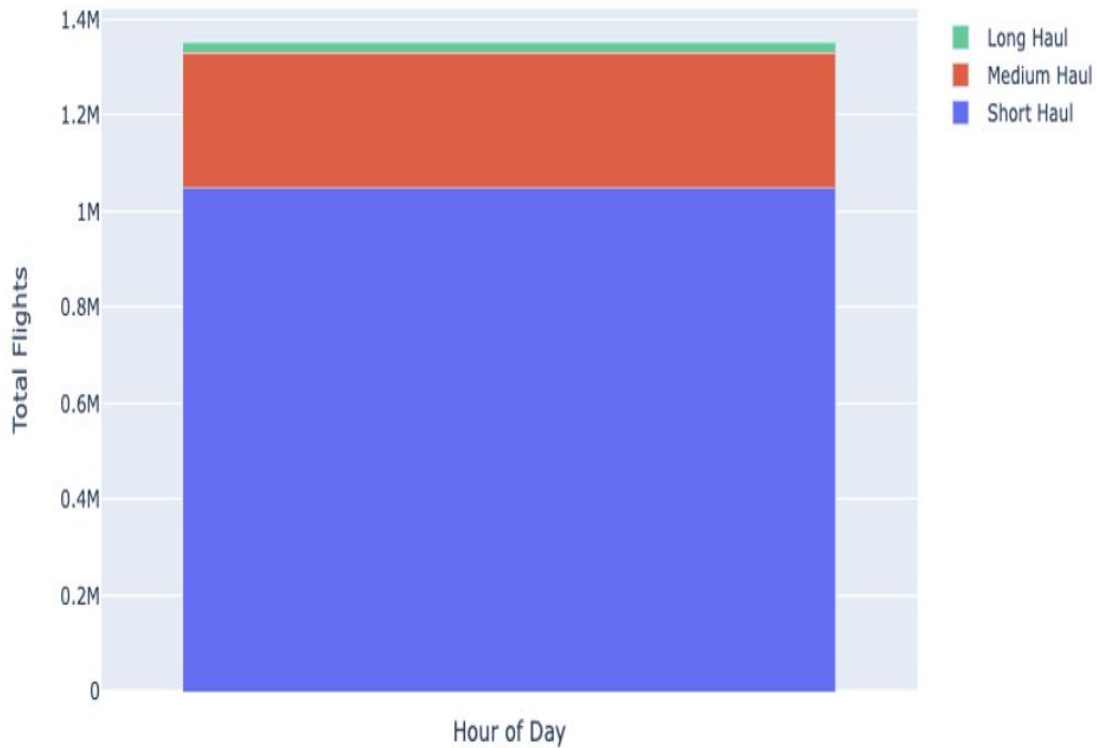




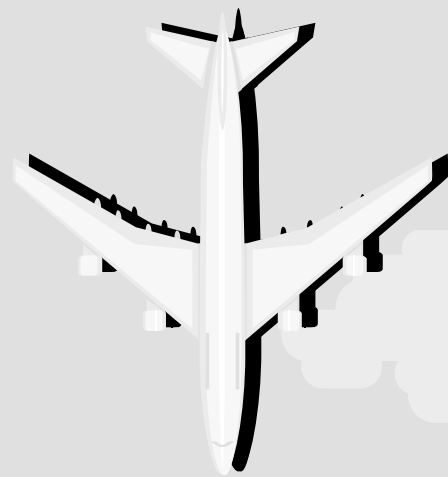
## MOST POPULAR DESTINATIONS WITH THE LONGEST DEPARTURE DELAYS







- short haul: less than 3 hours
- medium haul: 3-6 hours
- long haul: more than 6 hours





# Regression



Linear Regression

0.38

R<sup>2</sup>  
Score

0.68

Random  
Forest

# Classification

	Logistic Regression	XG Boost	Random Forest
Accuracy	0.692	0.55	0.73
Recall	0.735	0.69	0.59
Precision	0.587	0.63	0.78
F1 Score	0.674	0.66	0.64



**Thanks!**

