

An illustration featuring a pilot in a dark suit, red tie, and cap standing behind a wooden desk. A large yellow speech bubble originates from the pilot, containing the text 'Don't you see it's raining? Your flight is delayed due to bad weather...'. To the left, a white airplane with blue accents is shown in flight. The background consists of a grey sky with stylized clouds; one cloud on the left is raining, while others are light blue. The bottom of the image is a dark blue wavy line representing the ground or sea.

**Don't you see it's raining?  
Your flight is delayed due  
to bad weather...**

**By Amy Su**



# Methodology

1

## Data

- Flight data from Bureau of Transportation Statistics
- Weather data from DarkSky API

## Modeling

- Logistic Regression
- Random Forest Classifier
- XGBoost

3

2

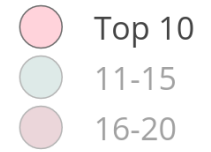
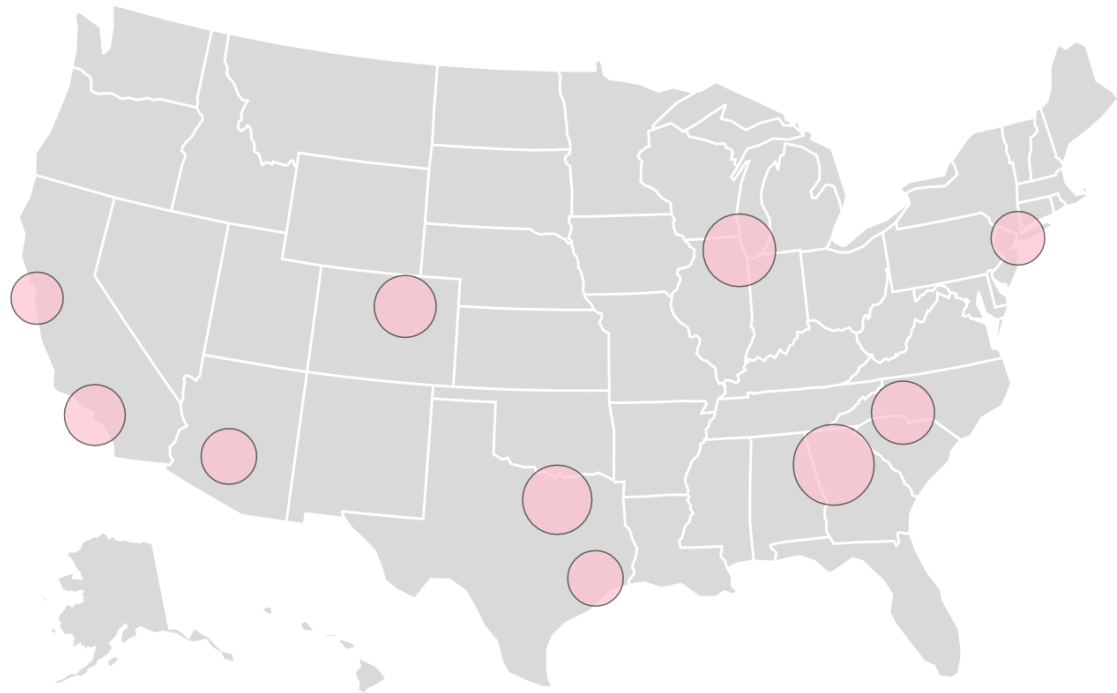
## EDA and Feature Engineering and Selection

4

## Results and Conclusions



## Top 20 Busiest Airports by Traffic



**ATL**

**ORD**

**DFW**

**CLT**

**DEN**

**LAX**

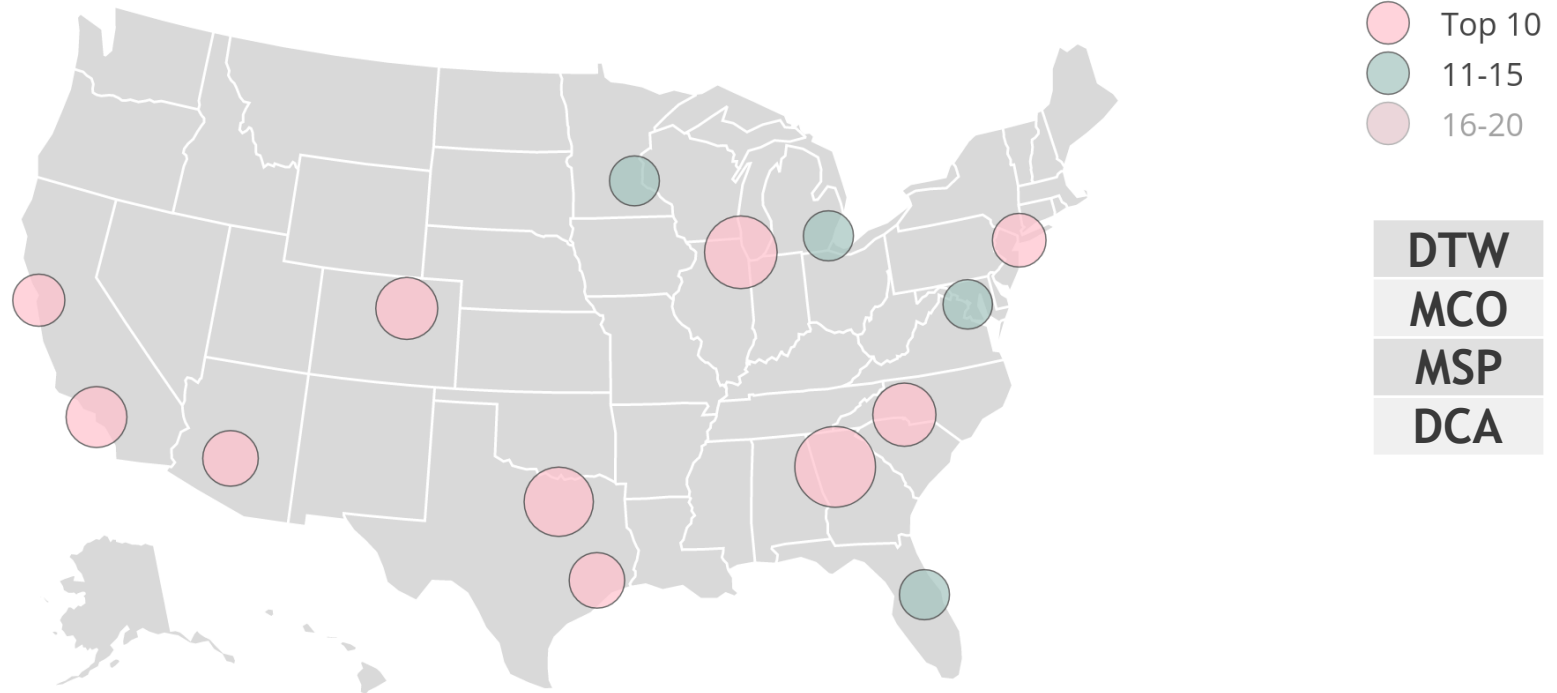
**PHX**

**IAH**

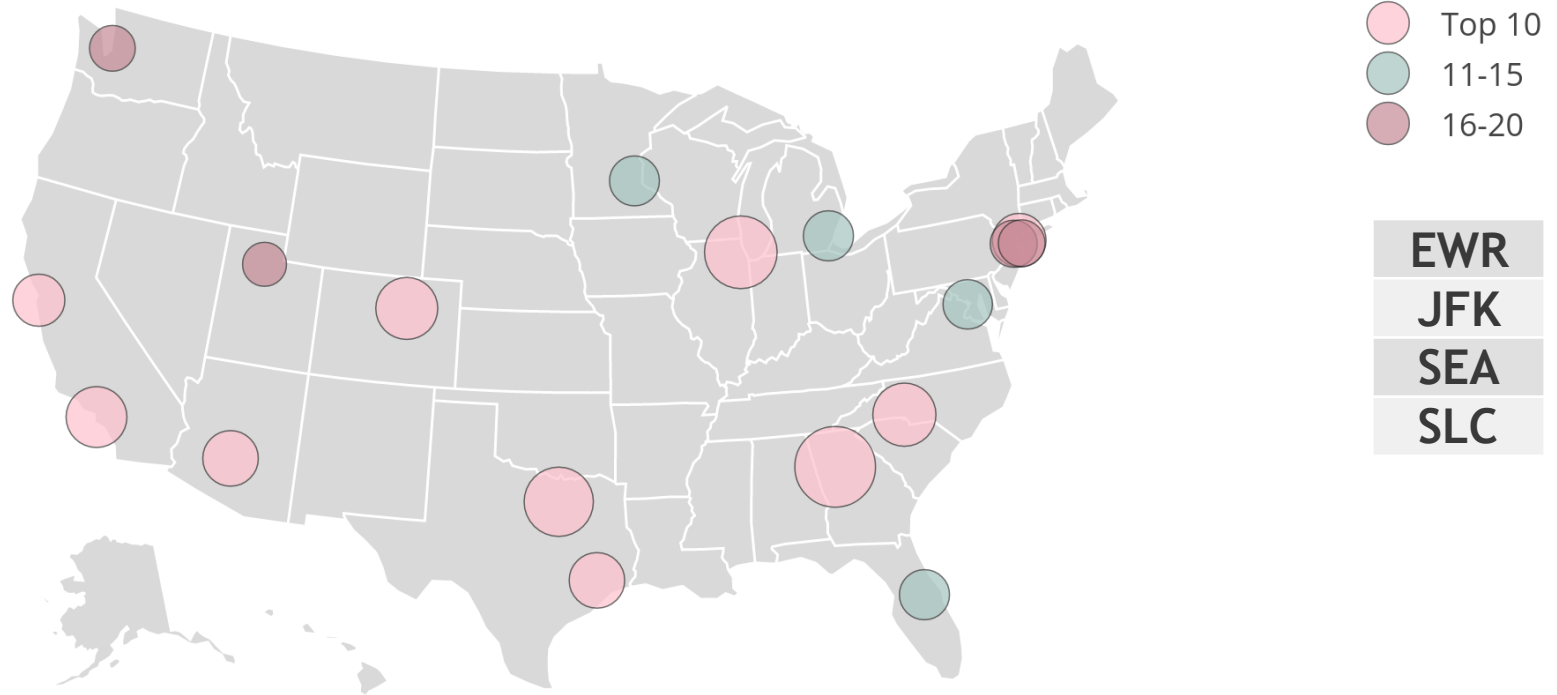
**LGA**

**SFO**

## Top 20 Busiest Airports by Traffic



## Top 20 Busiest Airports by Traffic



# Results

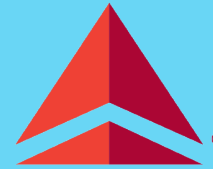


**F1 Score: 0.71**  
**Accuracy: 0.90**





**LGA** LAGUARDIA  
AIRPORT



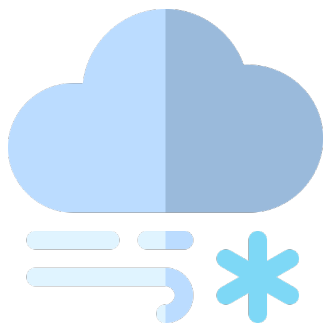
**DELTA**



Hartsfield-Jackson  
Atlanta International Airport







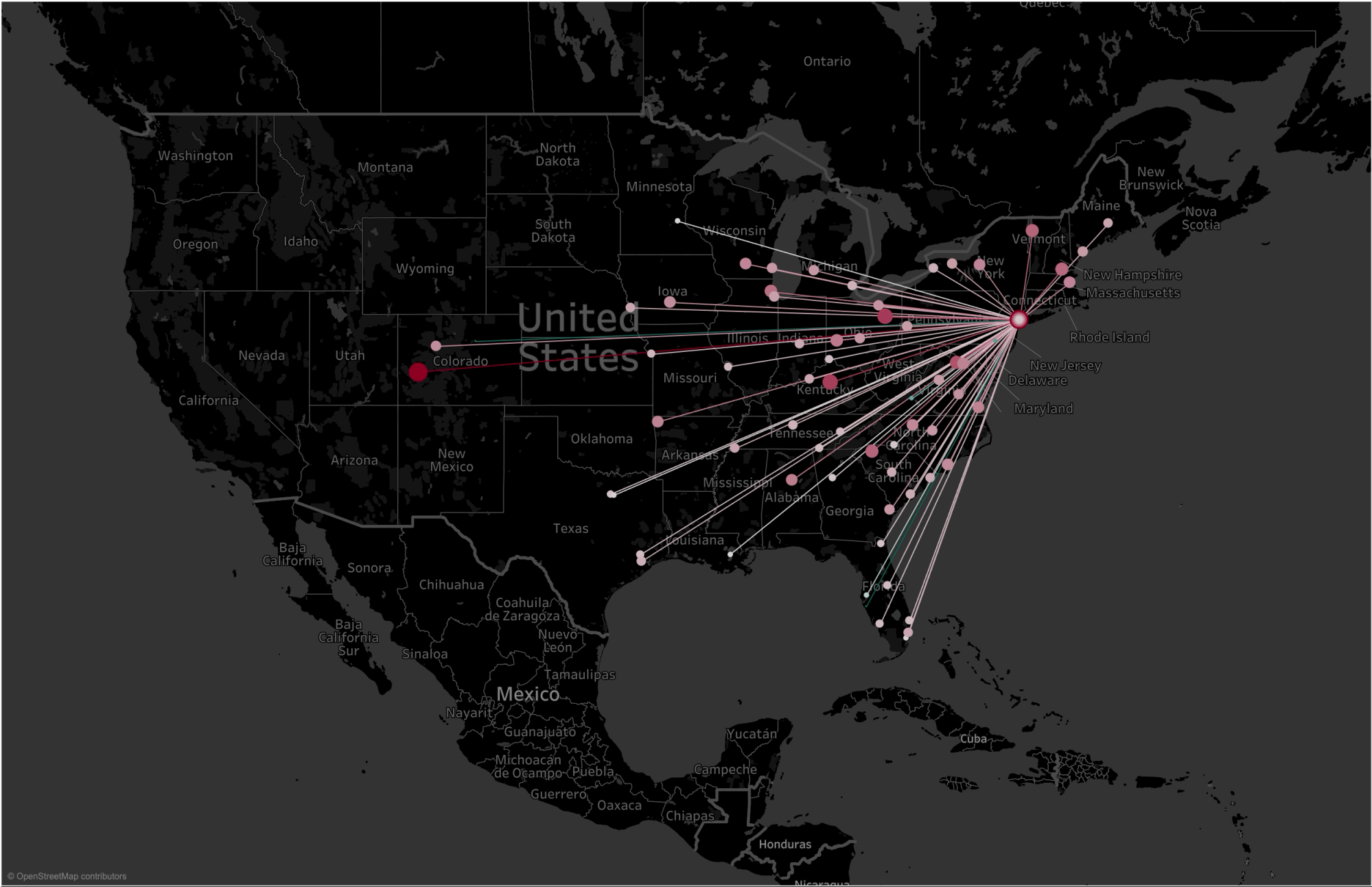
LGA



Hartsfield-Jackson  
Atlanta International Airport



Average Delay (in minutes) by Airport



Origin  
LGA

AVG(Arr Delay)  
-7.38 75.00

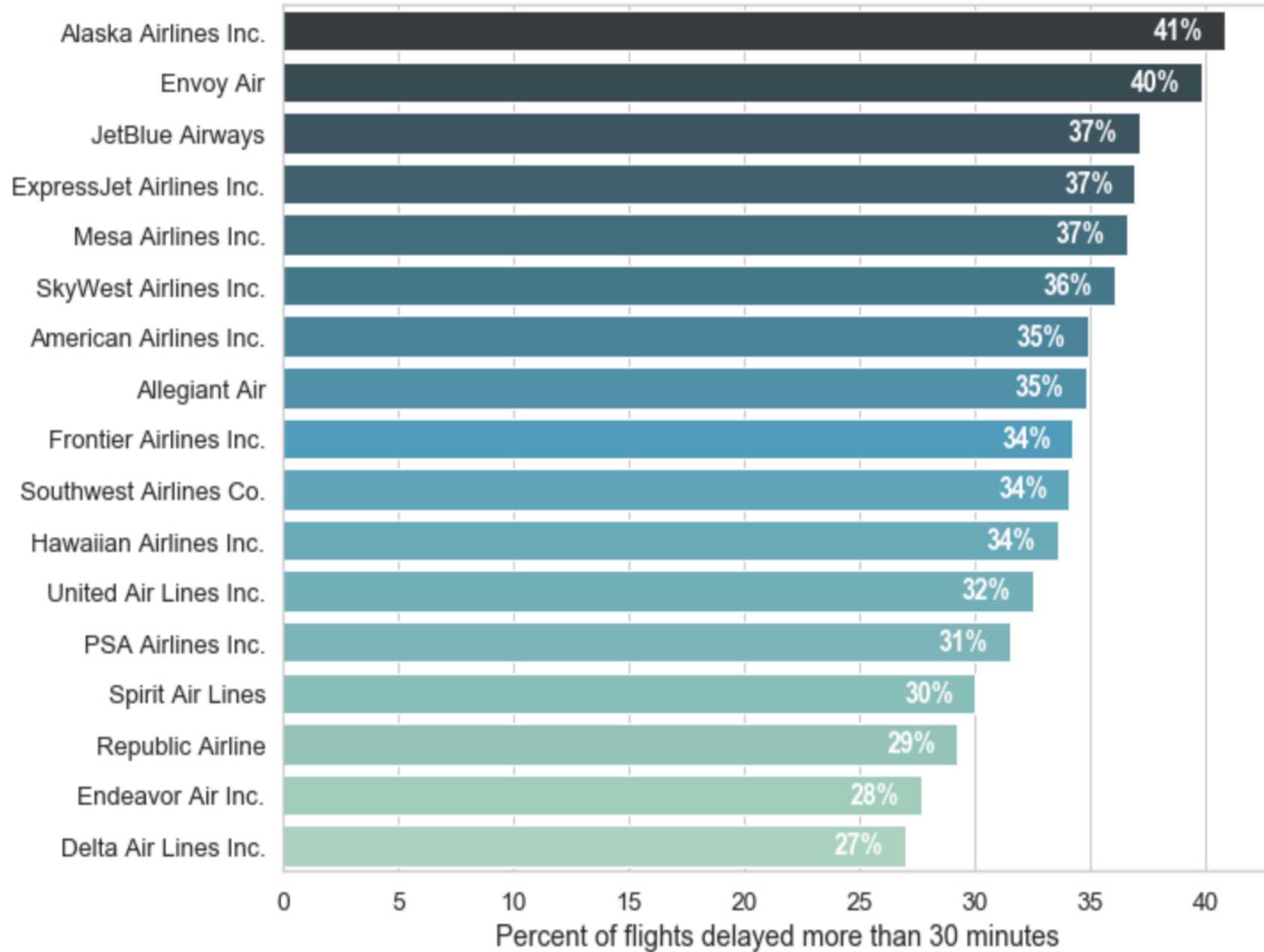
**Thank You**



# Appendix



Top 20 Airlines and Percent of flights delayed more than 30 minutes



Top 20 Airports and Average Delay in Minutes

