

A person stands in an airport terminal, looking out a large window at an airplane taking off. The scene is dimly lit, with the bright light from the window creating a silhouette of the person and their reflection on the polished floor. The airplane is visible in the sky, and the terminal's structure is visible in the background.

# **AN INVESTIGATION INTO FLIGHT DELAYS**

Flight  
delays are  
a hassle

A photograph of an airport departure board. The board has two columns: 'GATE #' and 'STATUS'. Every flight listed is marked as 'DELAYED' in red text.

GATE #	STATUS
A23	DELAYED
C72	DELAYED
B34	DELAYED
A14	DELAYED
C89	DELAYED
G12	DELAYED
C5	DELAYED
D13	DELAYED
A4	DELAYED
B22	DELAYED
	DELAYED

European  
regulation  
requires airline to  
return the money  
back if your flight  
is delay over 3+  
hours



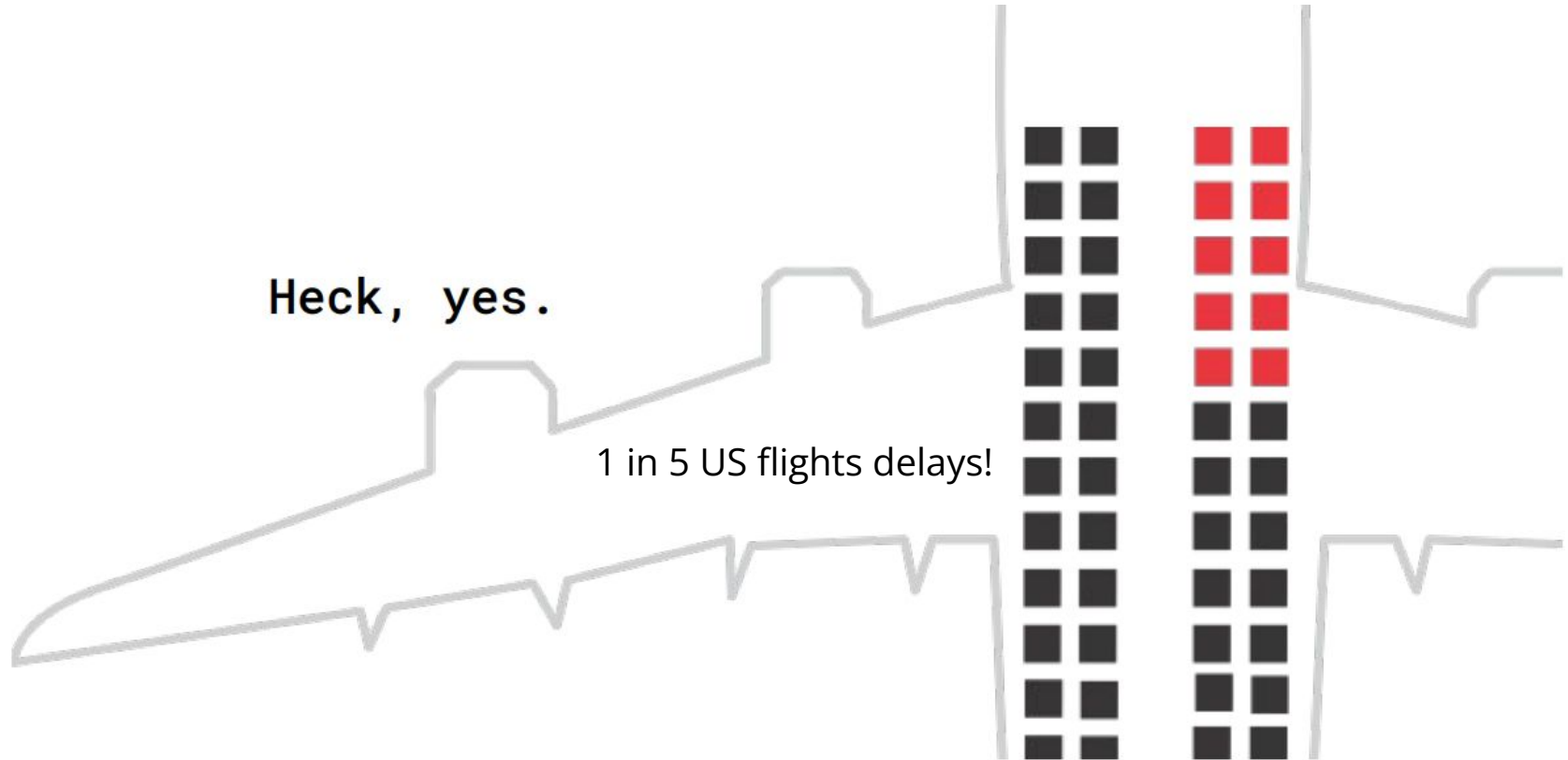




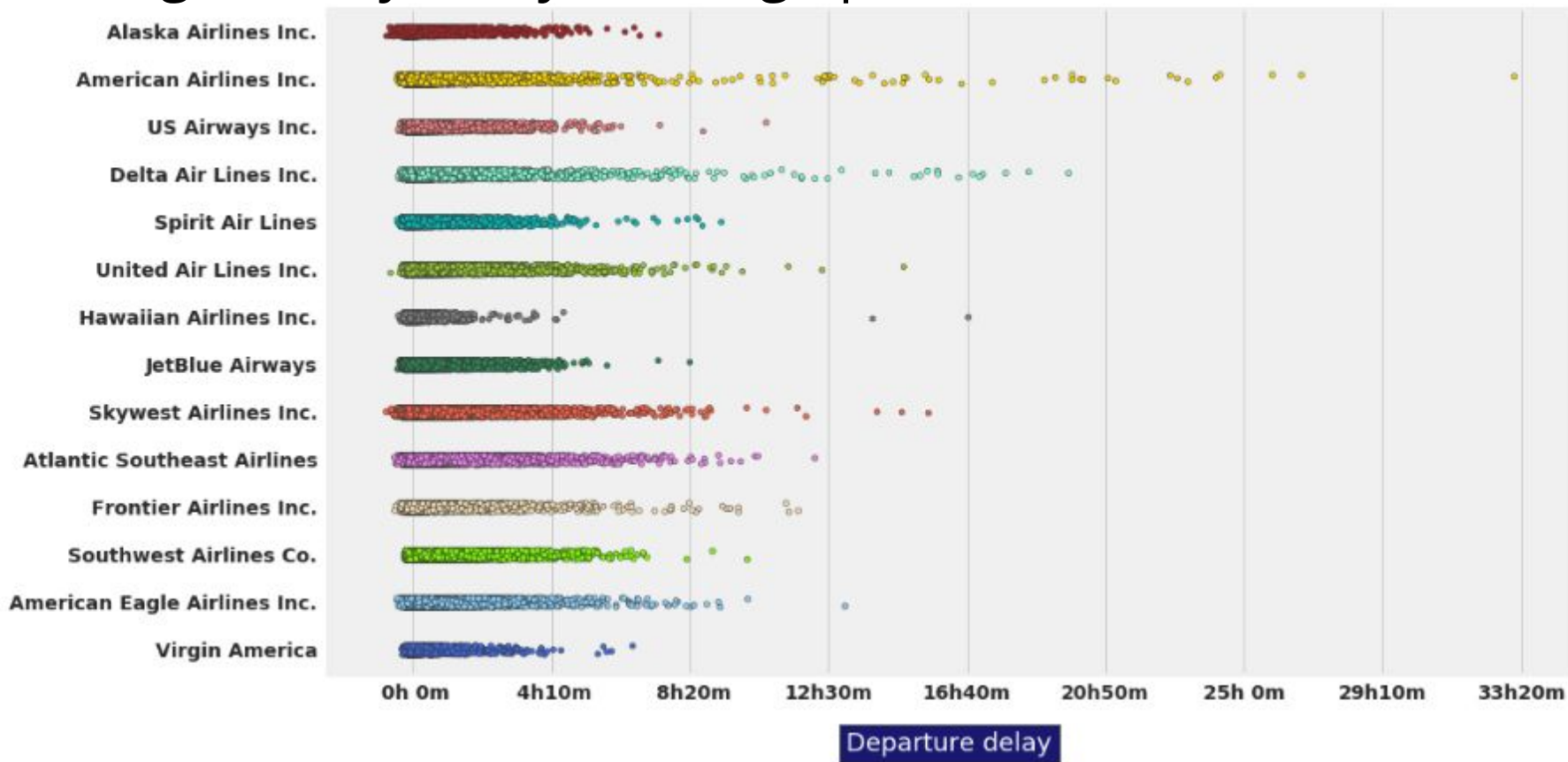
United State of  
America:



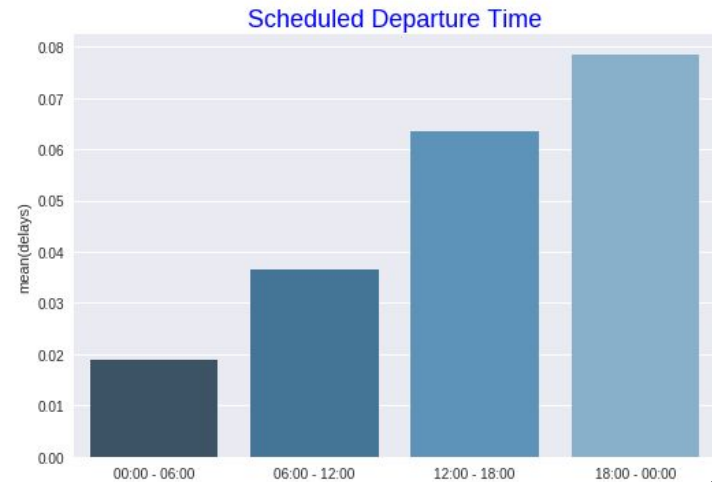
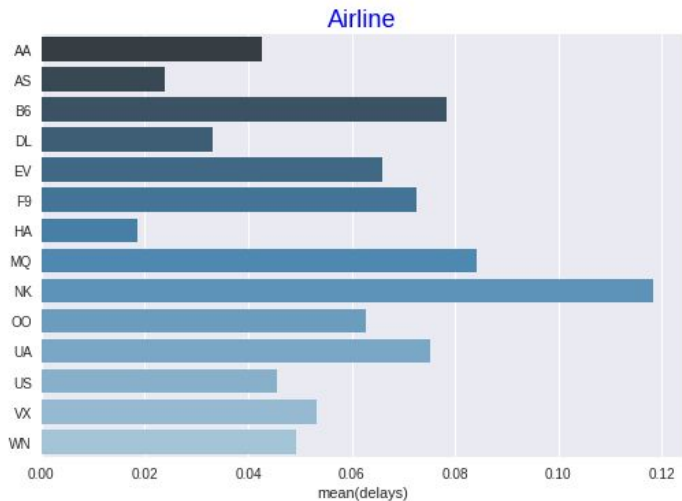
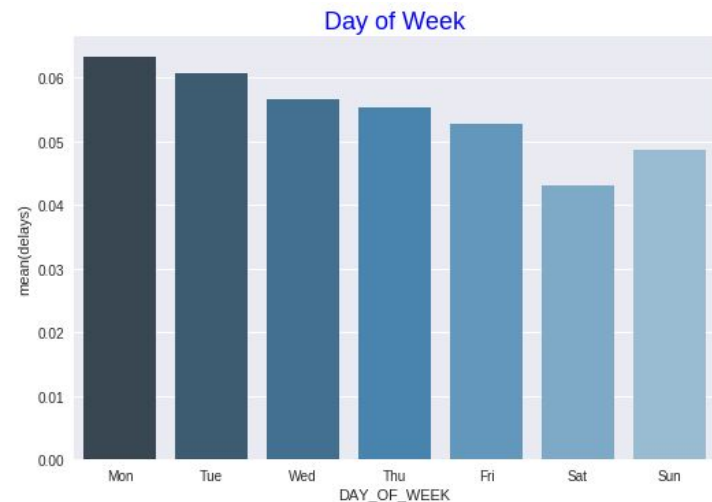
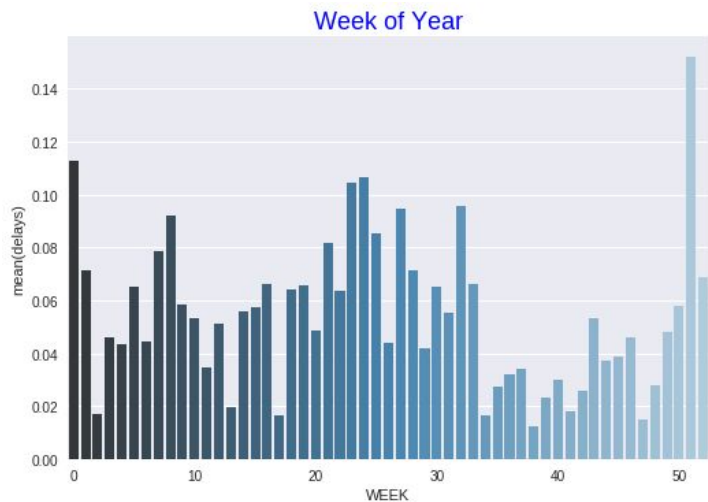
# Are delayed flights a problem in the USA?



# USA Flight Delay Analysis using open source data

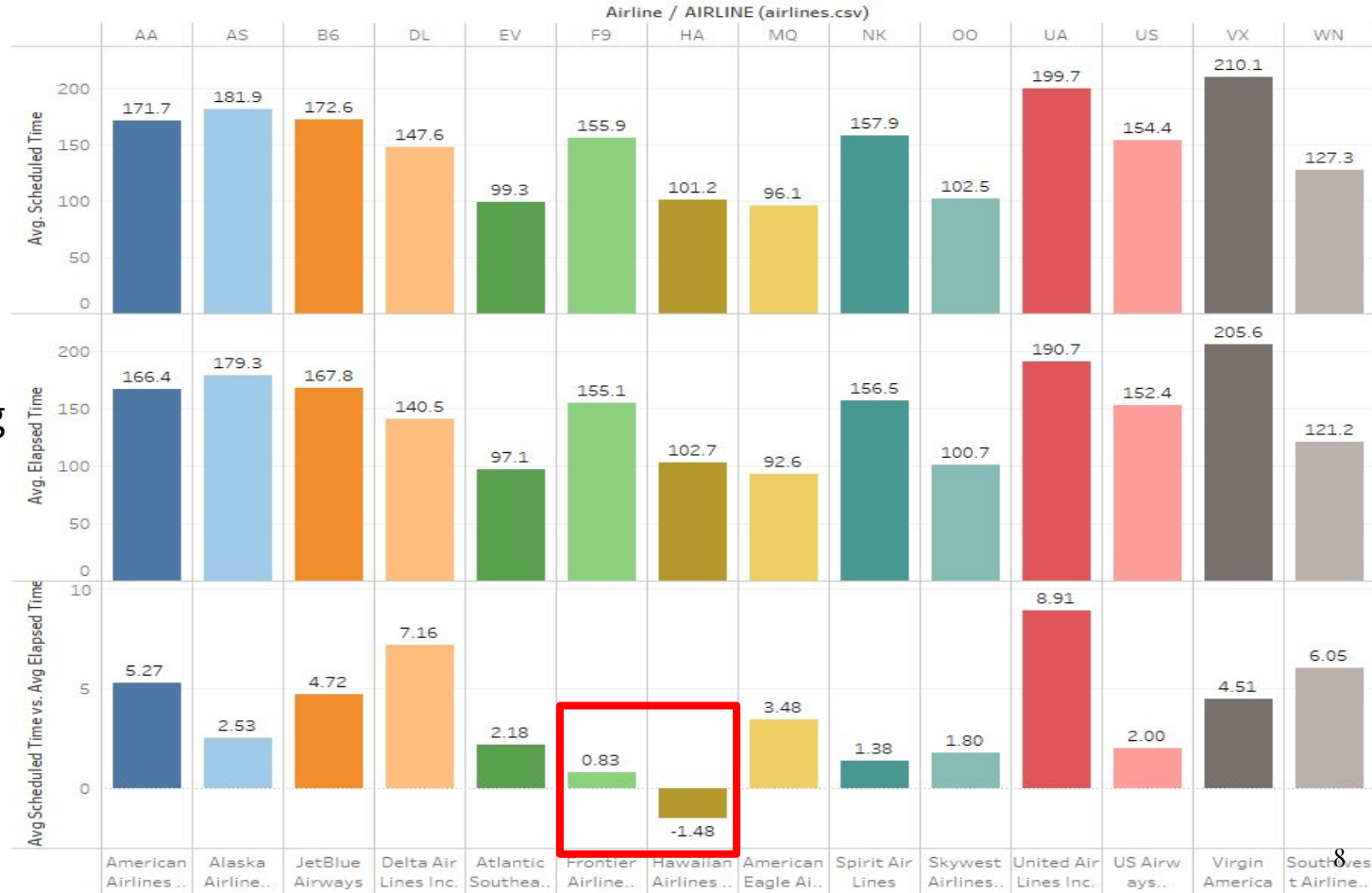


Peak time  
and  
weekend  
has the  
highest  
delays

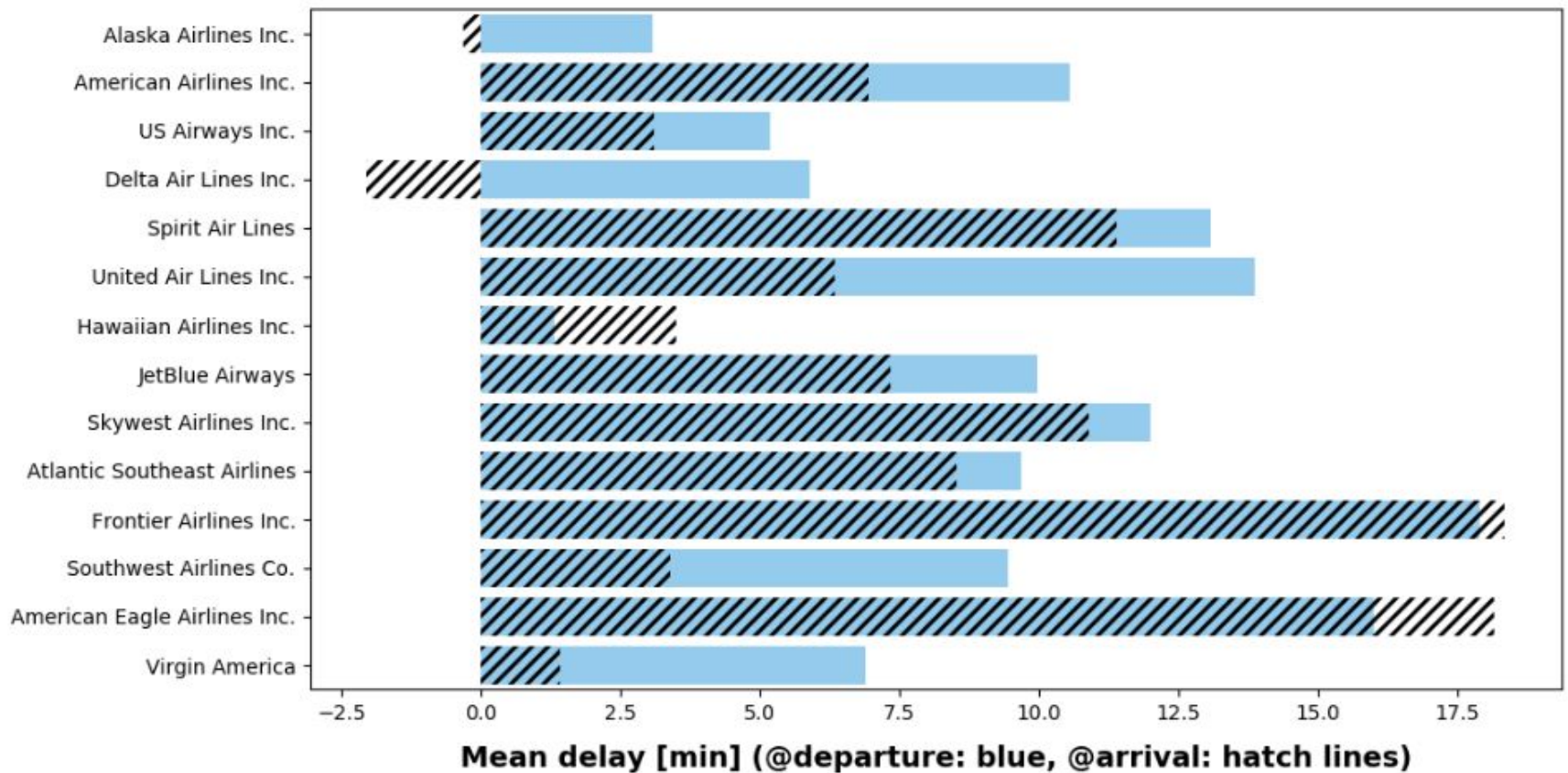


# AVERAGE SCHEDULED TIME VS AVERAGE ELAPSED TIME

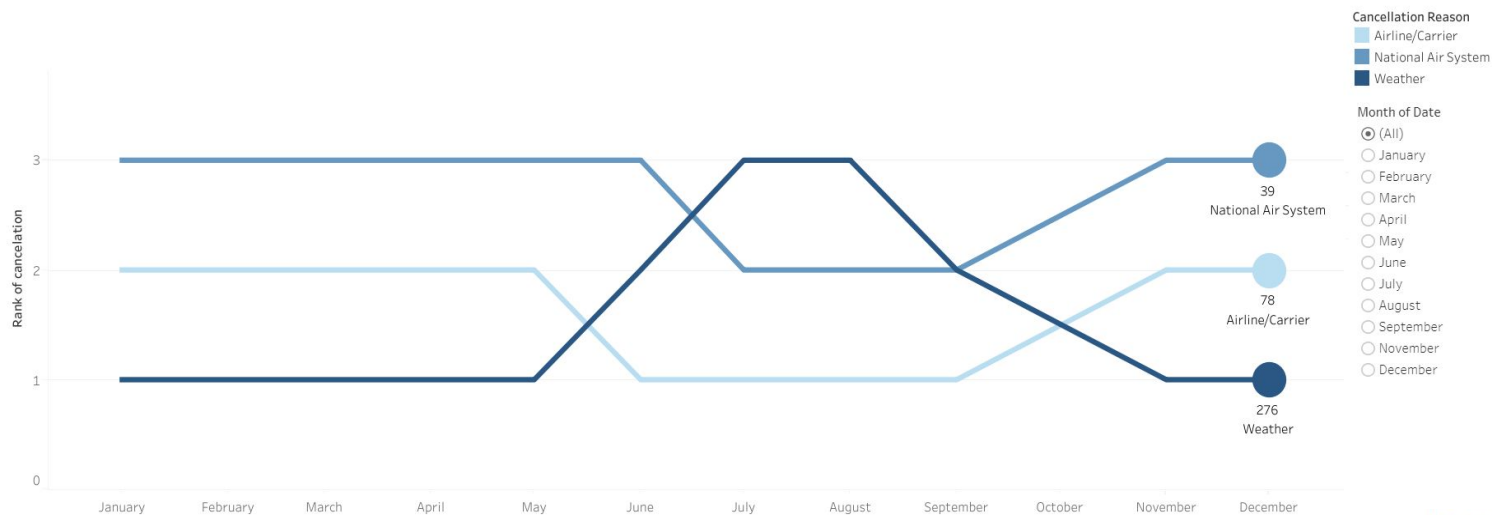
- United Airlines & Delta have the largest positive differences @ ~9min & ~7 min
- Frontier is just barely scheduling enough time at <1 min of buffer
- Hawaiian Airlines is not scheduling enough time.





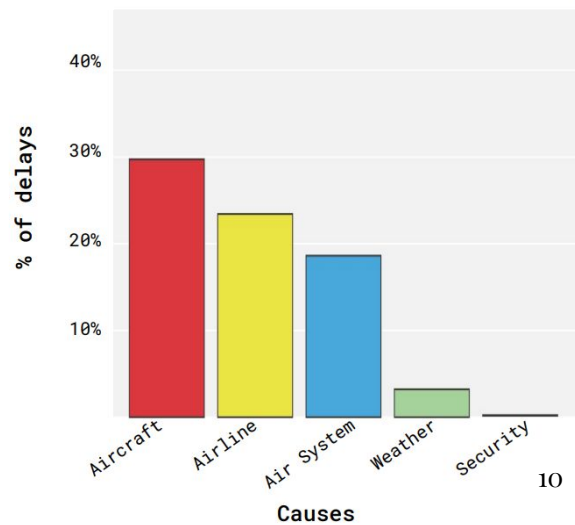


Arrival delay is generally lower than departure delay which means airlines adjust their flight speed to reduce the delays at arrival



Most common factors affecting delays

Distribution of Cause for Delay





Budget Airlines

Non-Budget Airlines

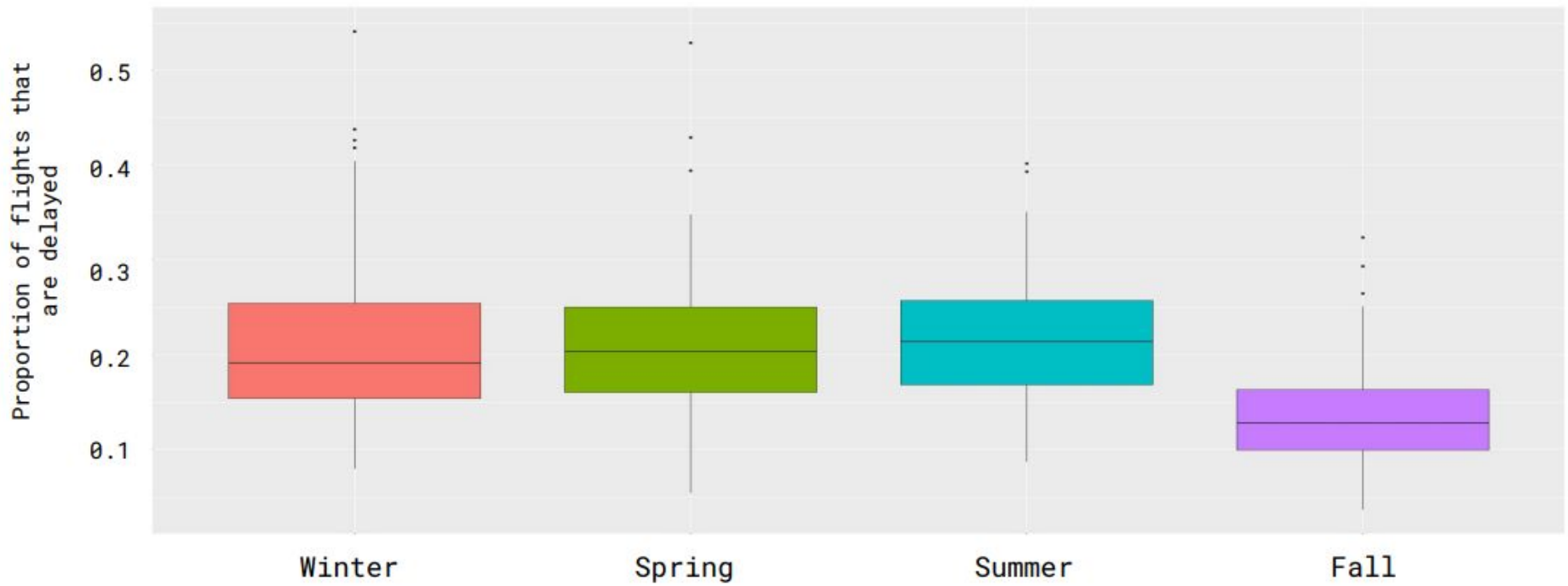
**"Budget"  
Airlines:**

- Spirit
- JetBlue
- ExpressJet
- Frontier
- SkyWest
- Southwest
- Virgin

**"Non-Budget"  
Airlines:**

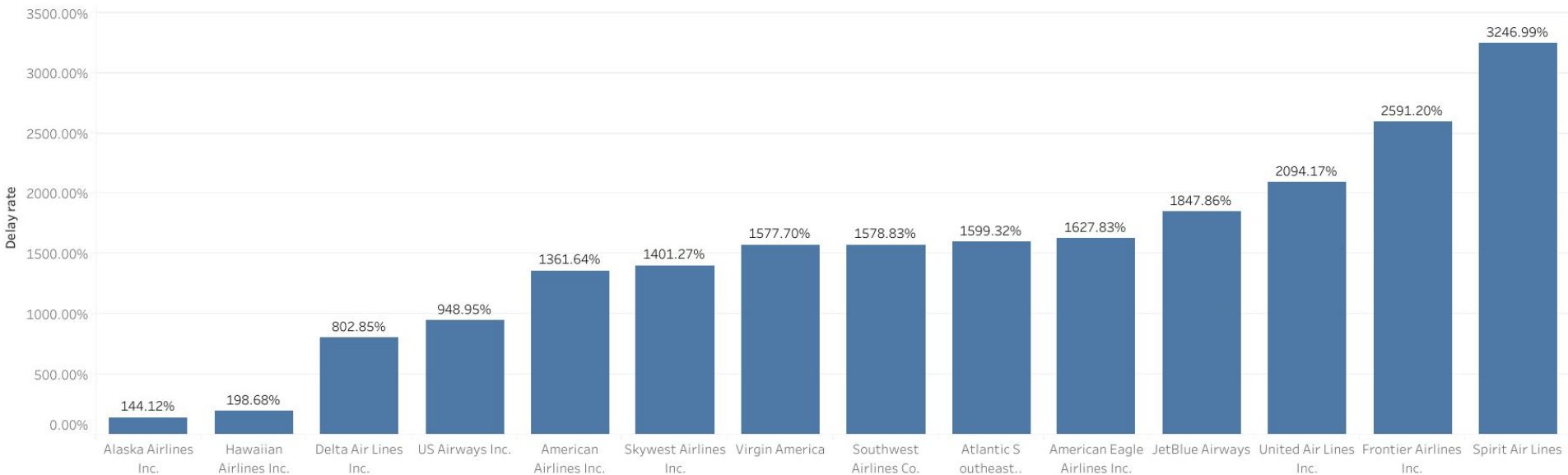
- American
- Delta
- Hawaiian Air
- United
- Alaska Air

Financial  
condition of an  
airline is not a  
major contributing  
factor



Only fall season has little impact on flight delays

# Quality of Airlines associated with low rate of delay





# Conclusion

- Flight delays are common with every airline
- Airline finances have not had much impact on flight delays
- The fall season is the only contributing factor when it comes to flight delays
- Airlines and aircraft are the major contributing factors weather is the least
- Peak hours and weekend experience more delays
- Airlines speed up in the air to catch up with the delays
- Airlines should alert customers whenever there is a flight delay
- Provide better routes and fares when a flight is at risk of being delayed

