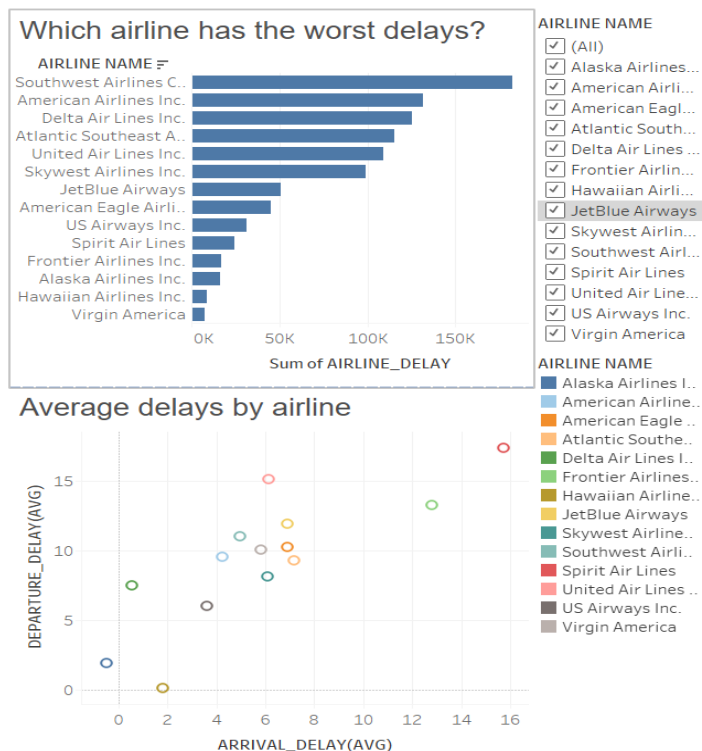


Summary

The U.S. has the highest number of air passengers in the world, with more than 700 million passengers (as per [U.S. Airline Traffic Data](#)) being transported each year (since 2004). With such huge number of travellers, airlines and airports are very busy and flight delays are expected to happen now and then. If you wanted to avoid flight delays, which airlines should you avoid? what causes the delays in this airlines? What time of the year should you fly? month would you choose to fly?

Insight 1: Which airlines or airports have the worst delays?

<https://public.tableau.com/profile/ivoline.ngong#!/vizhome/DataFoundations-Project4Airflight1/Dashboard1?publish=yes>



In both visualization, we notice that Southwest Airlines has the worst delays followed by American Airlines. The airline with the least Airline delays is Virgin America.

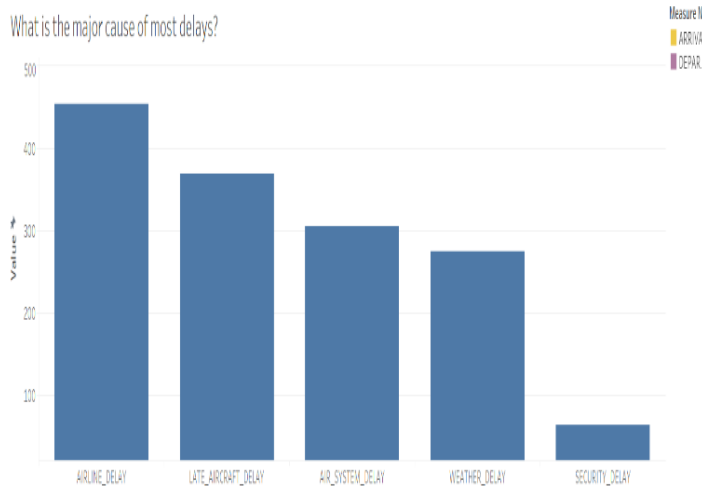
Design Choices

1. Colors are chosen with consideration for color blind readers
2. The bar charts are ordered in descending order to ensure easy reading understanding
3. A filter is added to make sure user can easily navigate between content.

Insight 2: What causes delays?

<https://public.tableau.com/profile/ivoline.ngong#!/vizhome/DataFoundations-Project4Airflight2/Dashboard2?publish=yes>

What is the major cause of most delays?



Airline delays are the main cause of most delays in airports. Additionally, it can be seen that the lowest time of travel delays September to August. It is likely this could be happening because of the weather as weather is a major cause of many cancellations. Travelling between May and July can be quite stressful as this is when delays are at the peak.

Are arrival and departure delays affected by time of the year?



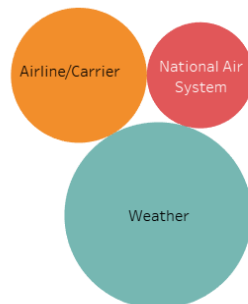
Design Choices

1. Because the data being presented represents a time series, one of the most natural ways of displaying it is in the form of a line graph which was the one chosen.
2. Also, the bars are put in descending order in order to ensure easy reading and understanding.
3. The bars are all drawn one chart to avoid distraction.

Insight 3: What causes flight cancellations?

<https://public.tableau.com/profile/ivoline.ngong#!/vizhome/DataFoundations-Project4Airflight2/Dashboard3?publish=yes>

What's the main reason for Cancellations?



CANCELLATION_RE..
■ Null
■ Airline/Carrier
■ National Air Sys..
■ Weather

CANCELLATION_RE..
● (All)

○ Null

● Airline/Carrier

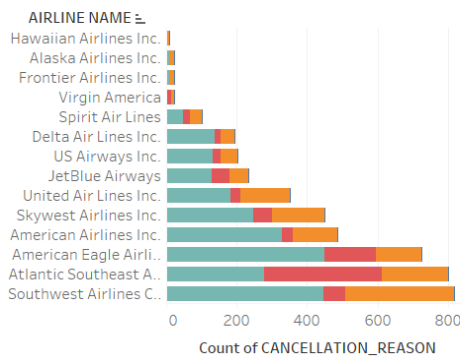
○ National Air Sy...

○ Weather

We see from the dashboard that the main cause of flight cancellations is the Weather, followed by Airline/Carrier and lastly the National Air System.

We also notice the Hawaiian Airlines Inc. is the airline with the least frequent cancellations while Southwest Airline has the most cancellations mainly because of the Weather.

What airports have the least frequent cancellations?



Design Choices

1. The colors chosen are suitable for those who are color-blind.
2. A stacked bar chart and bubble chart were chosen in order to enhance easy reading for the user. A filter for Cancellation Reasons was added so the user can easily see the proportion of cancellation for each state.
3. Same colors are used for both charts to enhance readability.

References

1. <https://www.kaggle.com/usdot/flight-delays>
2. <https://github.com/rborin/uda-dand-flights>
3. <https://www.youtube.com/watch?v=9xqHA732LMA&feature=youtu.be>