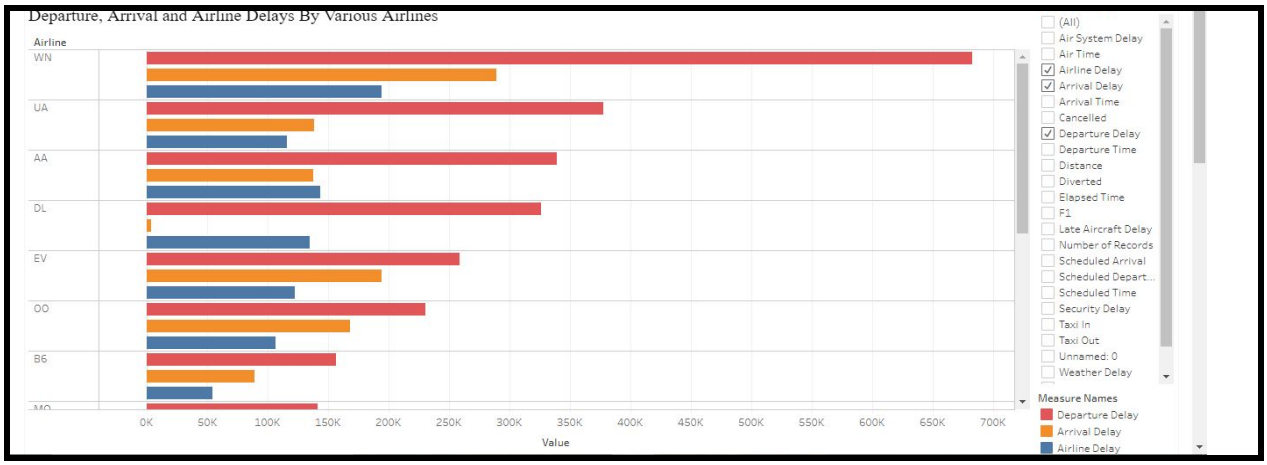
Data Visualization With Tableau

Visualization 1: Departure and Arrival Delays By Various Airlines

Lnk:

https://public.tableau.com/profile/garima.aggarwal#!/vizhome/review2visual1/Sheet1?publish=yes



Summary:

It can be observed from the visual that both departure and arrival delay are maximum for WN airlines. They are minimum for HA airlines. Moreover there is more difference in departure delays among airlines as compared to arrival time delay difference.

Design:

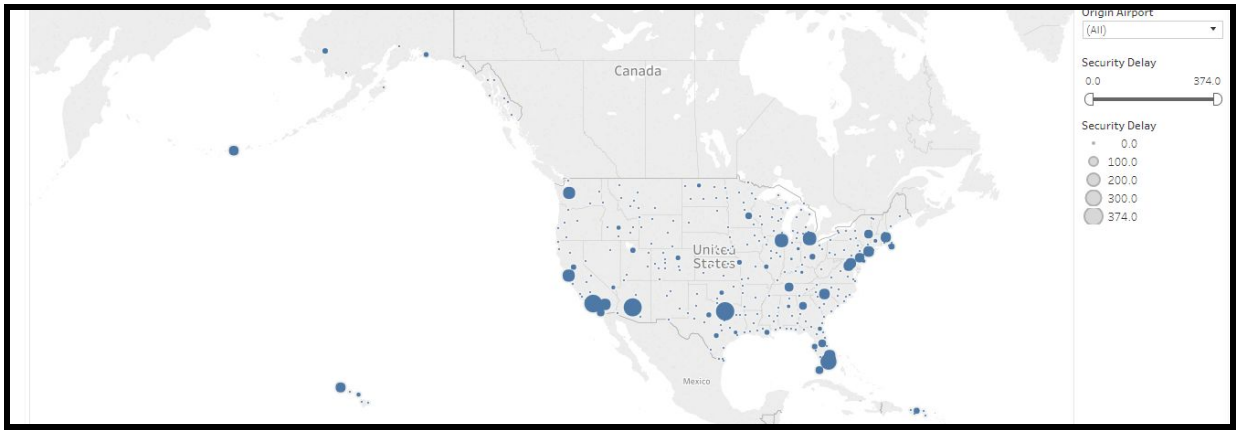
I have used the concept that length of bars is good idea to show data for comparing. Also sorted data makes it easy to study the visualization.

Resources : N/A

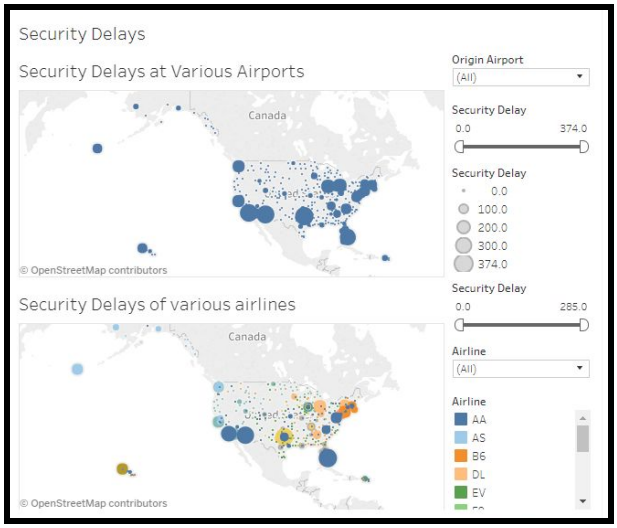
Visualization 2: Security Delays at various airports

Link:

https://public.tableau.com/profile/garima.aggarwal#!/vizhome/Book5_1587/Dashboard1?publish=yes


Canada
United States
Mexico
Origin Airport
(All)
Security Delay
0.0
374.0
Security Delay
0.0
100.0
200.0
300.0
374.0


Canada
United States
Mexico
Origin Airport: DFW
Security Delay: 374.0
Origin Airport
(All)
Security Delay
368.000
374.000
Security Delay
374.0


Security Delays
Security Delays at Various Airports
Canada
© OpenStreetMap contributors
Security Delays of various airlines
Canada
© OpenStreetMap contributors
Origin Airport
(All)
Security Delay
0.0
374.0
Security Delay
0.0
100.0
200.0
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0.0
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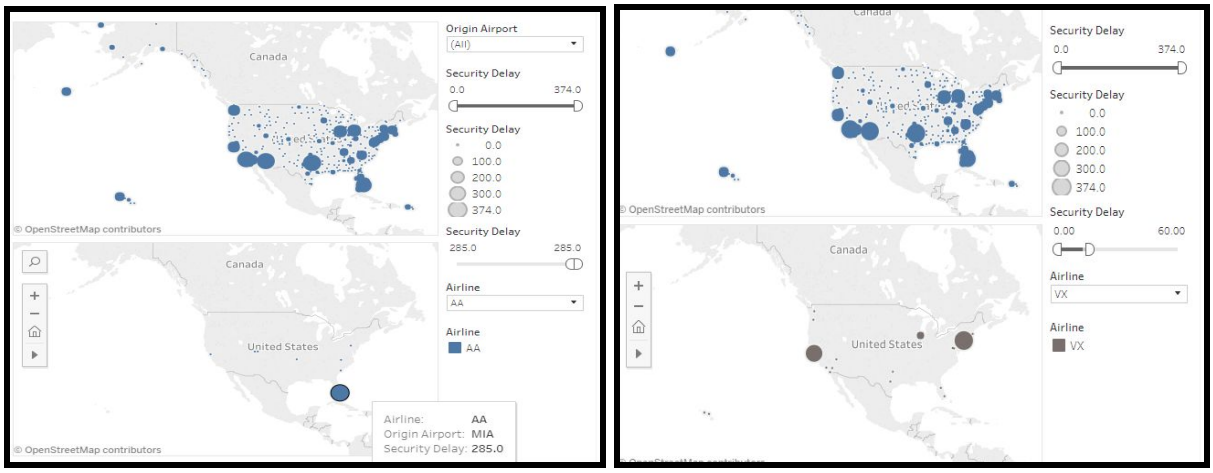
Airline
(All)
Airline
AA
AS
B6
DL
EV



Summary:

This visualization tries to find which airport has maximum delays due to security checks. It turns out to be DFW. To plot the airports on the map, right click on the origin airport slab and change Geographic Role to Airport.However using filters for each airline separately(as shown in second plot), it is found that different airlines have maximum security delays at different airports rather than DFW. For example, the airline AA has maximum security delays at MIA airport, whereas the VX airline has maximum security check delays at LGA airport.

Design:

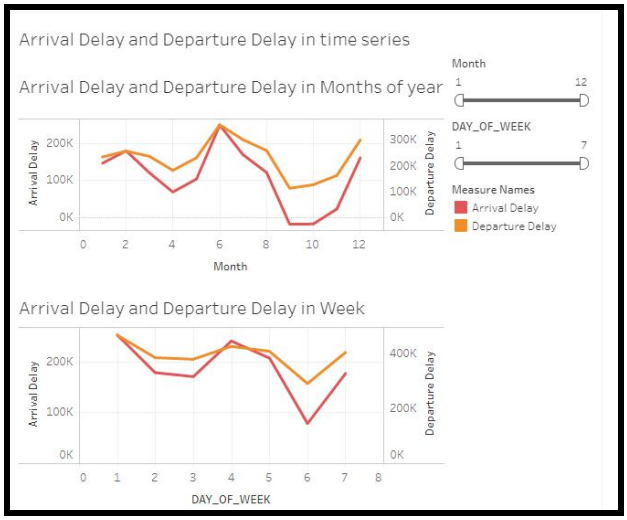
Filter of Size has been used to display the number of security delays at various airports across USA. More is the size of the circle, more are the security delays.In the second visual of the dashboard, colour has been used to filter out security delays on different airports.

Resources : N/A

Visualization 3 : Variation of delays with weekdays and months of year

Link:

https://public.tableau.com/profile/garima.aggarwal#!/vizhome/Book6_1051/Dashboard2?publish=yes



Summary:

This is a dashboard. It is seen that on Monday the departure delay is maximum. The upper plot shows Arrival delay and Departure delays according to months. The downward plot shows these delays when we take the weekdays as numbers (1=Monday). In the database, exact days of the week are not given, so using the CALCULATED FIELDS functionality, first calculate the date for each record using MAKEDATE() function. Then extract the day of the week using another CALCULATED FIELD and formula DATENAME.On Saturday both the departure and the arrival delays are minimum. Also it is seen that the delays skyrocket during the summer season that is in month of June. It is a common thing to expect high delays during December because of holiday season or winter blizzards but this is not true. According to the data, the maximum delays occur during summer month of June. This is also verified by this report.

Design:

In this dashboard for both the visuals, line graphs are used for dual axis and time series. Also the colour coding is done keeping colour blindness in mind.

Resources:

https://milecards.com/2016-summer-airport-delay-study/