Flights Data Visualization using Tableau

My Tableau workbook can be found in this link
https://public.tableau.com/profile/jayashree5637#!/vizhome/Flightdata1/Flightdelaystory

Summary:

RITA publishes datasets containing information on United States flight delays and performance.I have downloaded the data for the period between March,2014-March 2017 from this link

https://www.transtats.bts.gov/OT_Delay/OT_DelayCause1.asp

I have created visualizations that answers the following question:

1.Carrier causing delay most frequently

2.Airport with highest number of delays

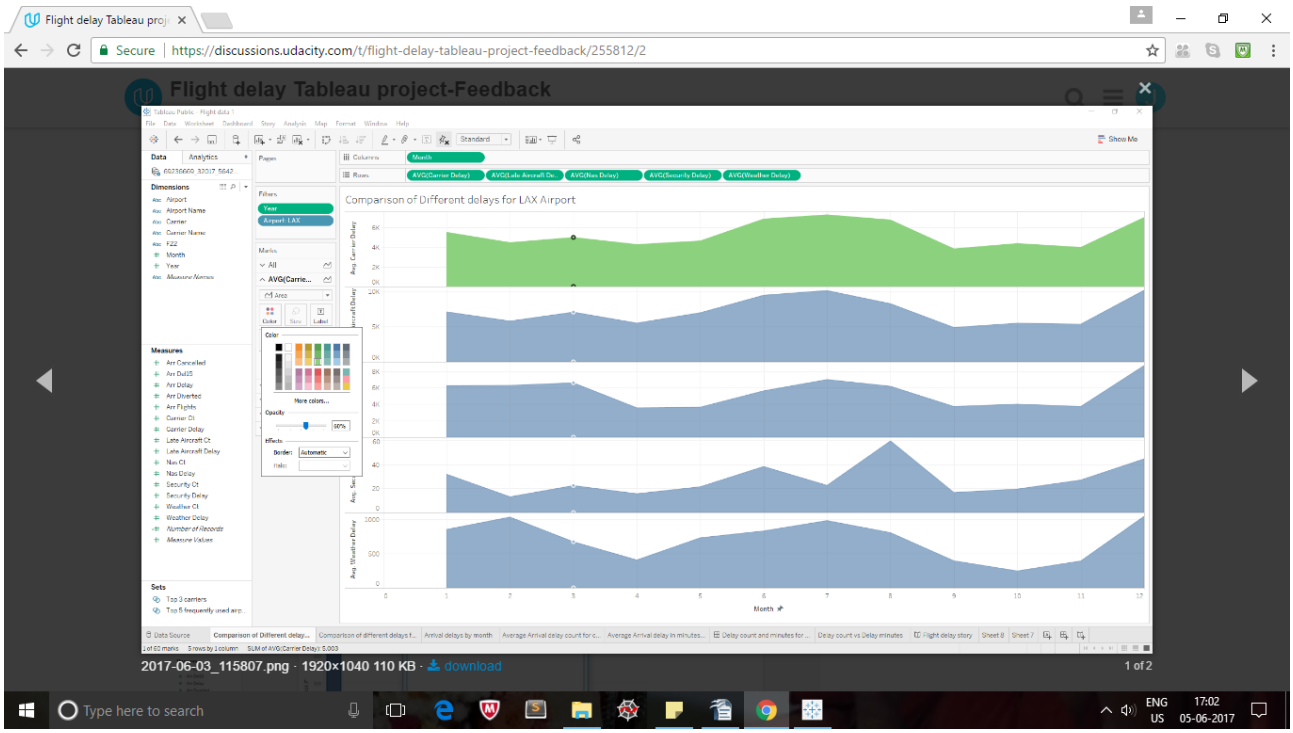
3.Distribution of different delays across months

4.Percentage of delay contributed by top 5 busiest airports

Design:

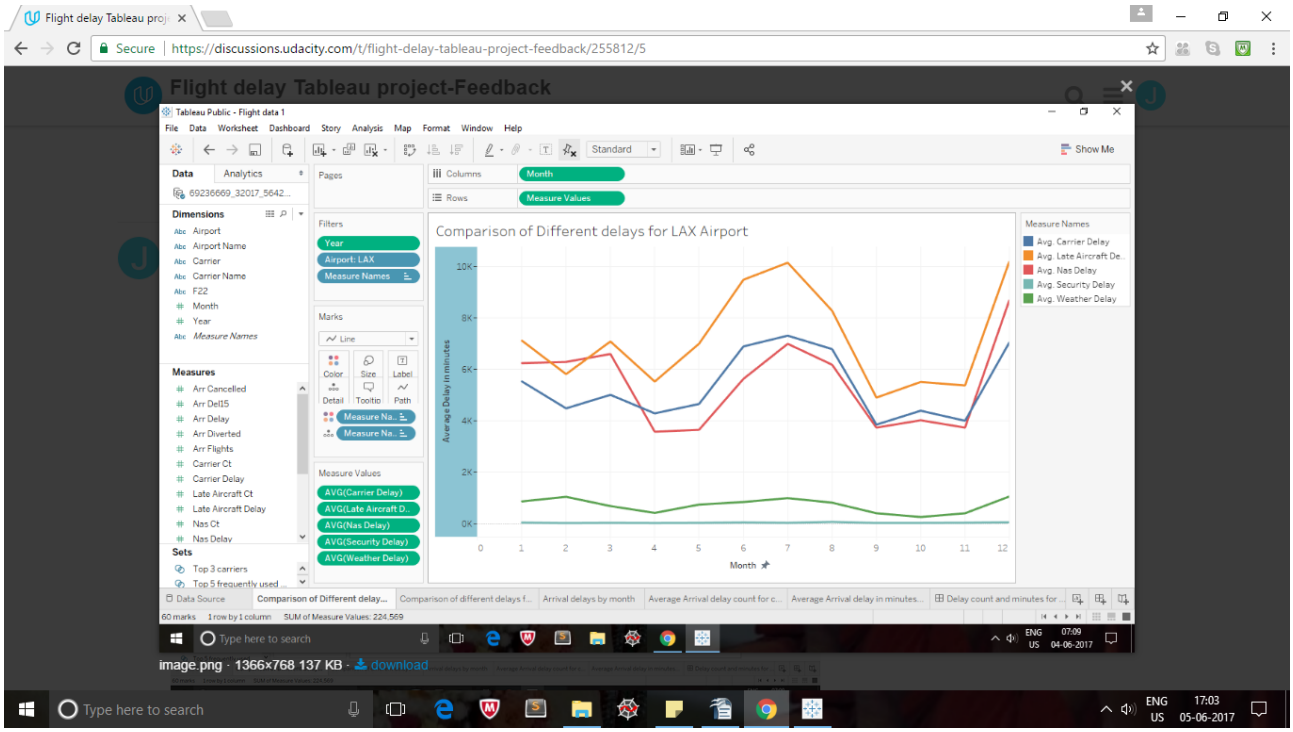
I have initially created visualizations showing distribution of average delay contributed by top 5 busiest airports.Later changed it to percentage of delay upon feedback from Forum Mentor George.In my first sketch,I have compared different delays using area chart.Later,I changed every delays to line chart.Upon receiving feedback for my second version,I have changed security delay to area chart to highlight the low frequency delay.I chose bar chart to find the percentage of delay caused by top 5 airports as it is simple to interpret and depicts the information clearly.

First sketch screenshot showing comparison of different delays using area chart



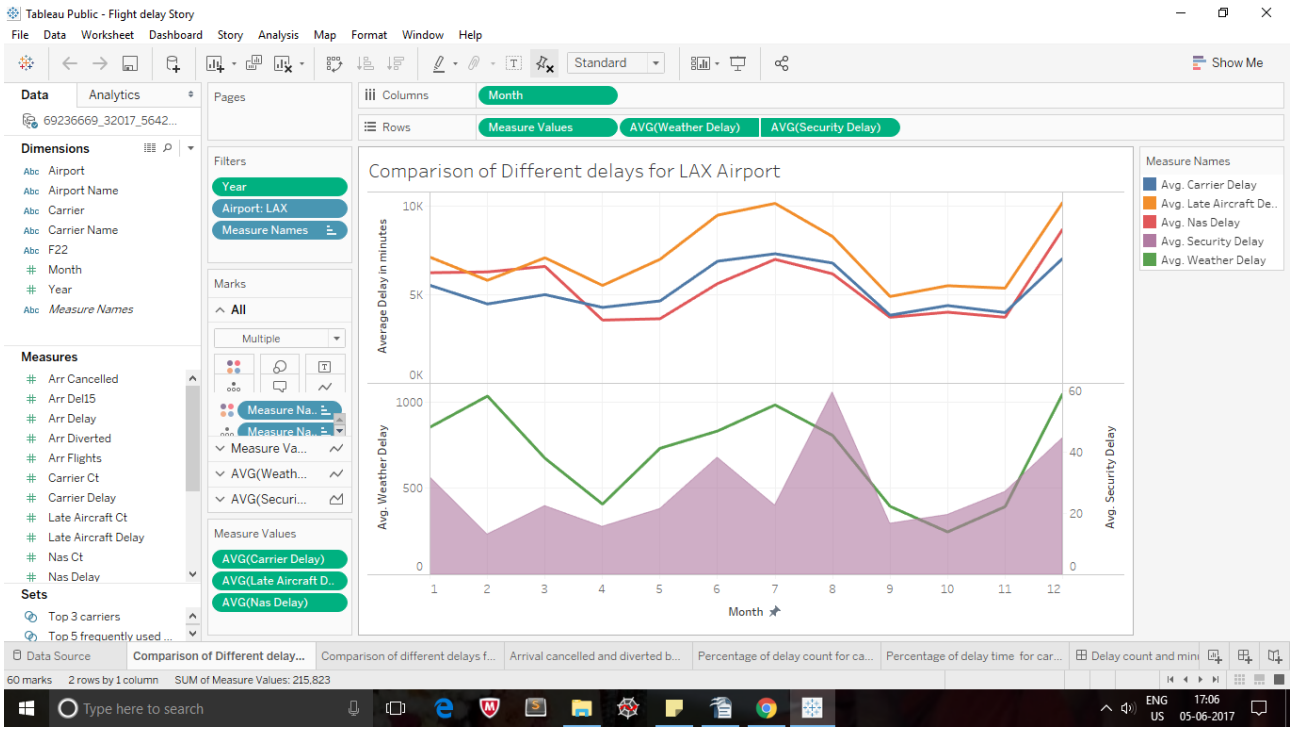
I received feedback as to change area charts in to line charts for better comparison.Hence I changed all the delays in to line charts.

Second version of workbook showing comparison of delays using line chart



I got feedback that one delay can be changed to area chart to highlight the delay to the audience.I chose security delay as it is a low frequency delay and plotting it as area chart will emphazise its presence.

Final version:



Feedback:

The discussion form link shows the feedback that I received for my story from first sketch to final visualization.

https://discussions.udacity.com/t/flight-delay-tableau-project-feedback/255812/8

Feedback for my first sketch from George Liu

Great job overall, I particularly like the 4th slide which clearly helps identify the biggest delayers for us to avoid Please consider the following for improvement:

- •For the first several time series visualizations, consider using line plots to reduce the number of subplots. You can use color to identify different attributes (y-axis options)
- •Click on the x-axis for de-highlight the selection
- •Consider using delay percentage if possible to make the comparison between different carriers more insightful
- •The last visualization may need revamp since it's not immediately what is the main point to convey, also the axes definition is not clear

Feedback for my first sketch from SeaML

I like the data that you chose and the insights you brought out from it. It's interesting that most delays occur in June/July.

For the first two slides, the y-axis is labeled as "value'. I'm not sure what the units are that I'm looking at.

On slide #3, I thought it was interesting that delay trends more with "diverted' than "canceled". That could make sense if a flight is canceled, then maybe a passenger is not considered "delayed".

I was curious on slide 3 if the "average # of delays" is partly influenced by more flights during June/July. What if you made this average delayed flights / flights?

Feedback for my second version from George Liu:

Nice work! Some further suggestions:

- •Make sure you click on the Month axis in your visualization before saving to Tableau Public, otherwise, the x-axis will keep highlighted as shown in the image below.
- •Also consider changing one of the delays that you want to to highlight to use area chart. This not only brings more variation in your viz, also gives an opportunity to highlight what you want the reader to focus on
- •Adjust the color to match across the board
- •Consider changing the mark type for the last slide to circle and adjusting the size of the circle

Resources:

Tutorial Videos from Tableau

Note:I have not saved different versions of workbook from first sketch to final visualization.The discussion form thread for feedback is the evidence that I worked on my visualizations upon receiving feedback.

Airport with highest number of records-Los Angeles International(LAX)
Carrier with highest number of records-SkyWestAirlines