Miriam Wanjohi

Initial story
https://public.tableau.com/profile/miriam.w2653#!/vizhome/MiriamWinitiaalFlightdata/Story1?publish=yes

Final story

https://public.tableau.com/profile/miriam.w2653#!/vizhome/MiriamWFlightdashboard2/Story1?publish=yes

Summary

The dataset I chose contains information on flight delays for major airline carriers across all airports in the United States in August, 2018. For the visualization project, I focused on Dallas/Fort worth Airport mainly because I reside in Dallas and I wanted to narrow my area of focus given the vastness of the data. I aimed at answering three questions; how many aircrafts were delayed at the airport, how many minutes in total were wasted due to these flight delays, and the impact on the delays in terms of total cost.

Design

I struggled a lot in trying to decide on the best graph to visually represent my data. Initially I chose one graph to show the total number of flights and color coded with the reason for delay, but it was not clear especially since one of the delay reasons had 0 data, hence the color was missing on the graph. I then decided to have 5 graphs in 1 (as shown in the screenshots below).
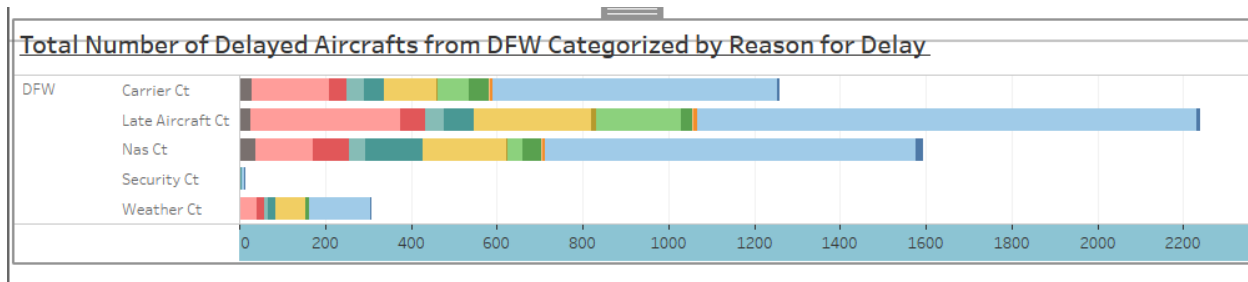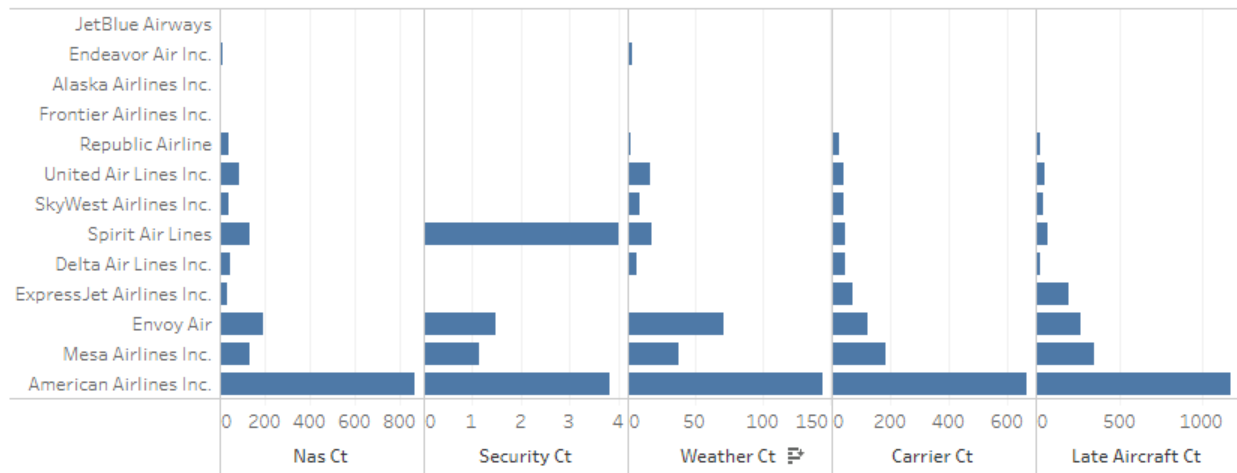
The change above was also due to some feedback I had gotten from one student.

I also played around with the packed bubbles graph as a way to represent the size of the total delay time for different airline carriers. I was happy with the outcome of the graph as it clearly showed what I was aiming at.

I did not use any line graph since the data I used was from only one month, hence did not have any data to show progression of time.

I created 2 calculated fields; total delayed time and total dollars lost and I used these values to plot the last 2 graphs.

Feedback

I received very clear and helpful feedback from my peers, some of it includes:

i. "Hi @MiriamW . Your story looks great, it's clear and concise, without information overload which accelerates understanding of the main findings. There are only two minor changes that could be made. I would add a color legend to the second graph (flight delays categorized in 5 groups) because it's not clear for me now what each color encodes. The second one is a color encoding in the last of your graphs (disparities among airline carriers) - since adding a color doesn't provide any additional information I would use only one color and different sizes." Adding a color legend to the bar graph since it was not clear what the colors represented – I solved this problem by creating new bar charts and eliminating the color coded bars

ii. I had created a horizontal packed bubble graph to represent the total delay time for each carrier and the circles had different colors. One student noted that since the colors did not provide any additional information, it was wise to just use on color and use size to show the differences. From this feedback, I opted for a packed bubble graph instead of the initial graph (see below for the initial graph).
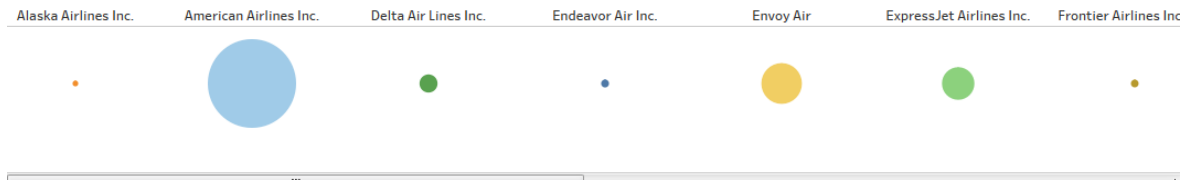
Updated graph
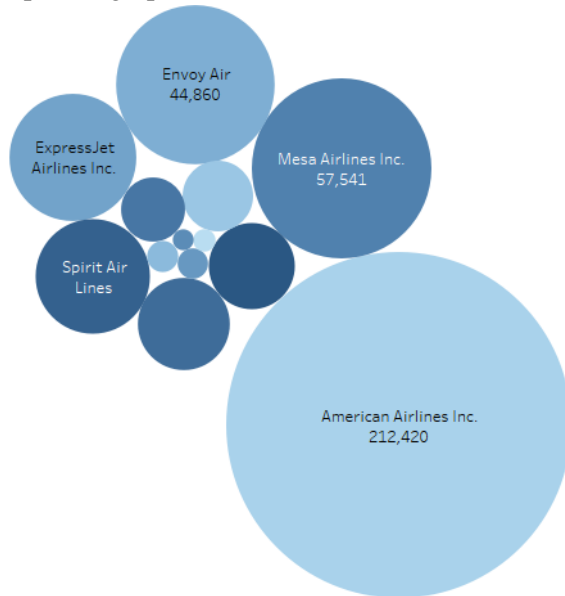
iii.   "The filters aren't shown aligned (maybe it is my PC configuration) and if I select several airports the bar chart ("total number of delayed...") becomes unreadable and the values of the total flight per carrier doen't change. I played with the filters and It seems not to respond properly.(maybe it is me ;))did you check it? the bar chart makes me difficult to identify which color belong to each carrier (maybe if you put the whole name instead of the carrier code?). the last comment would be on the last chart, it is difficult to have perspective of the sizes for comparison as the bubble are not together and maybe colors encodes doen't contribute so much." There was an issue with the filters in the initial dashboard whereby I had placed the airport name filter and when one selected a different airport, there was no data displayed. This makes sense because I only used data from DFW airport. I removed the airport filter from the updated dashboard.

References

U.S Passenger Carrier Delay Costs. Derived from http://airlines.org/dataset/per-minute-cost-of-delays-to-u-s-airlines/ on 11/23/2018.