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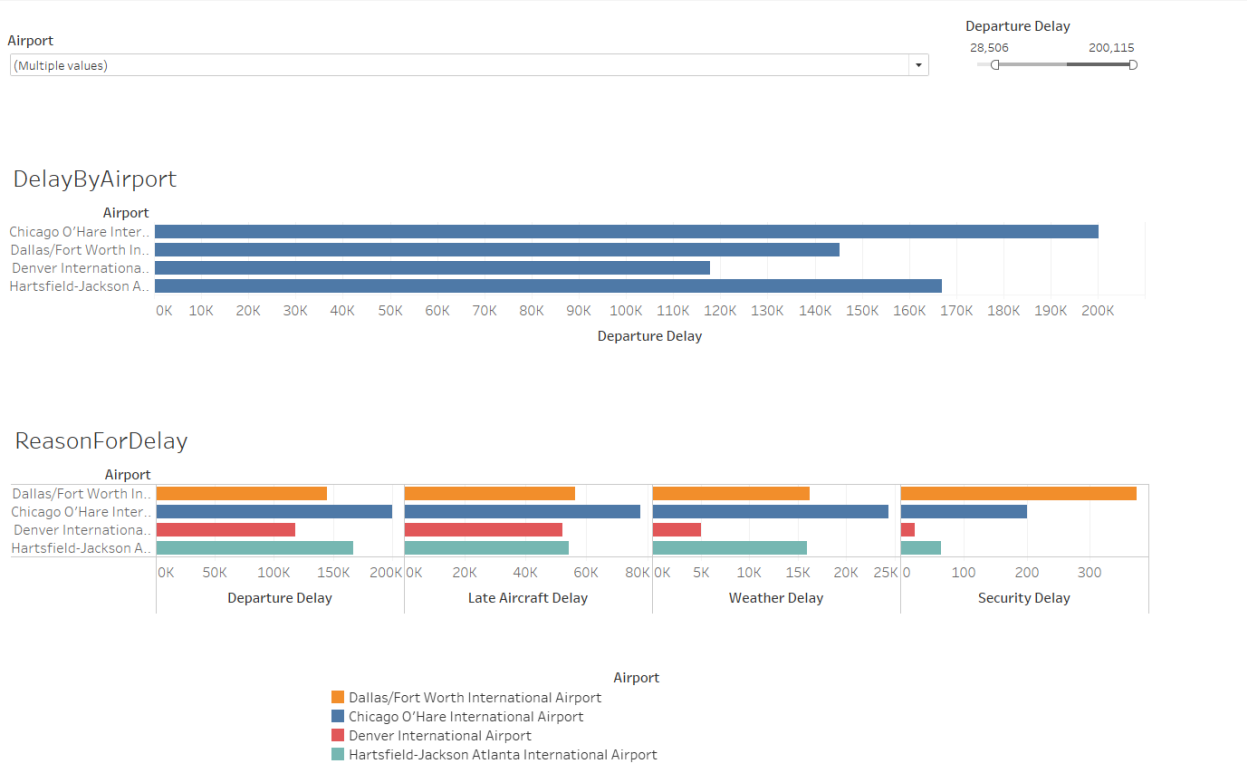
Insight 1:

Dashboard URL:

https://public.tableau.com/profile/nalini.sharma#!/vizhome/DelaysByAirport_v3/DelaysByAirport?publish=yes

Dashboard:



Insights:

I looked at departure delays by airport. The airports with the most delays are Chicago O' hare international airport (200,115), Hartsfield Jackson Atlanta international airport (167,006), Dallas Fort Worth International airport (145,239) and Denver International Airport (117,745). There were too many airports on the list so initially I filtered to delay hours greater than around 28,000 hours. I noticed that the airports with more delay hours were international airports.

After that I also decided to look at the reason for delays for the top four airports with the most delays. Chicago O'Hare airport had the most delays related to departure, late aircraft and weather. Dallas Fort Worth airport had the most delays due to security delays.

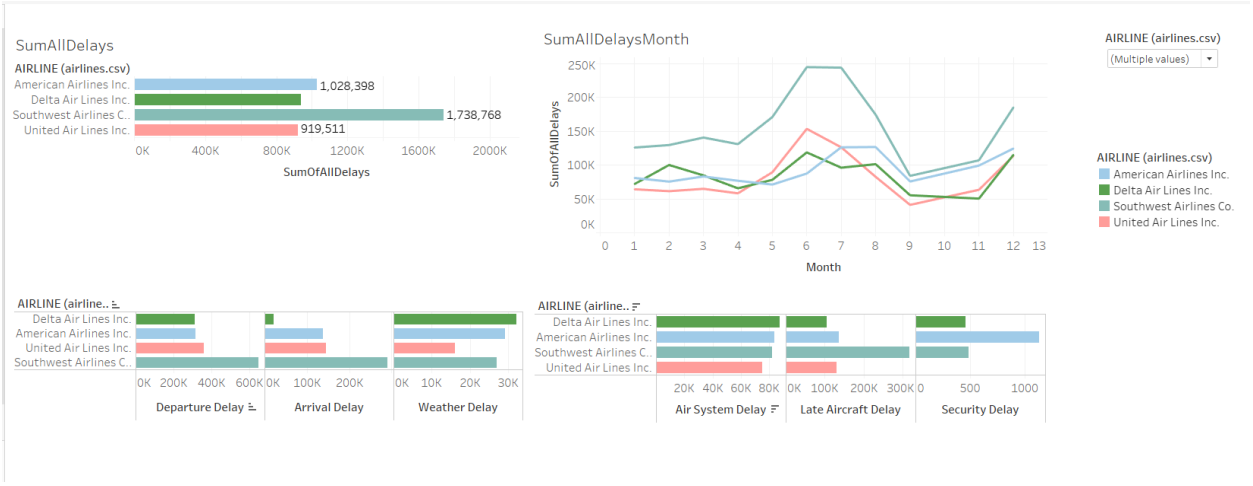
Upon advice from my mentor, I added an airport filter and applied the filter to the entire dashboard. This allowed me to select a few airports and improved the dashboard.

Insight 2:

Dashboard URL:

https://public.tableau.com/profile/nalini.sharma#!/vizhome/AirlineDelayv2/Dashboard1?publish=yes

Dashboard:



Insights:

In this dashboard I decided to review departure delays by Airlines and by month. I created a dashboard using four worksheets. A filter on the right selects the airlines. I also added colors to distinguish the airlines. Initially I was only looking at departure, arrival and weather delays, however, after reviewing all the columns in the dataset, I noticed that there was data related to air system, late aircraft and security delays and I decided to add that as well. Also, initially there was a separate filter for all worksheets which was confusing, however, I was able to use the "All using related data sources" option to use one filter for all worksheets.

In addition, I also decided to create an aggregated field which is a sum of all the delays. I created a bar chart showing the aggregate of all the delays and I also created a line chart showing the delays by month.

I noticed that the top four airlines for delays were Southwest (648,419), United (360,603), American (315,771) and Delta (311,657). I selected these four airlines in the filter. For these four airlines, the most delays were between the months of June and August. The least number of delays were in the month of September for three airlines and in November for Delta airlines. For Southwest airlines, the maximum hours of delays were departure delays. Compared to the other airlines, Southwest airlines had the maximum hours of delays for departure delays, arrival delays, weather delays and late aircraft delays. Delta airlines had the most weather and air system delays. Hawaiian airlines seem to have the least number of delays.

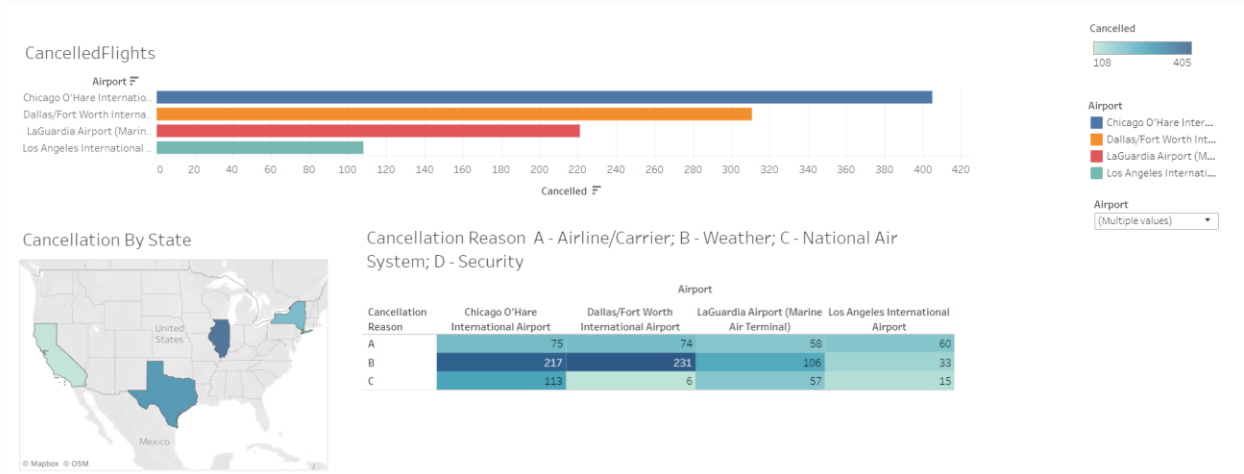
The line chart helped view the delays by month and the trend was generally the same by airline and by month. Most airlines had more delays in the same months (around summer).

Insight 3:

Dashboard URL:

https://public.tableau.com/profile/nalini.sharma#!/vizhome/CancellationV1/CancellationDashboard?publish=yes

Dashboard:



Insights:

In this dashboard, I decided to look at flight cancellations by airports. I created a bar chart dashboard, a map and another dashboard showing number of cancellations by airport and the reason for

cancellation. Chicago O'Hare international airport has the maximum number of cancellations (405) followed by Dallas Fort Worth (311), LaGuardia (221) and Newark liberty (167). When I looked at the reason for cancellation, the maximum cancellations in Chicago O'Hare and Dallas Fort Worth were due to the weather. In Chicago O'Hare, the cancellations due to National Air System were also high (113). I found that National Airspace System (NAS) may include non-extreme weather conditions, airport operations, heavy traffic volume, air traffic control, etc. When I looked at the map and cancellations by state, the maximum cancellations were in Texas (661), California (411) and Illinois (537). I also noticed that California was not showing up on the highest number of cancellations when I looked at the airports with the highest cancellations, however, California was showing on the map when I selected all airports. So, I checked the bar chart sheet, included a state filter and noticed that there are a lot of airports in California. Combining all delays from the airports caused California to have the higher number of cancellations.

Design Choices:

I decided to use bar charts because I felt that a bar chart clearly shows the differences in the totals for airlines/airports. I used a map in one of the charts in order to see which state had the highest cancellations. In order to see the cancellations by airport and by reason for cancellation, I decided to use a grid because the color coding reflected the higher number of cancellations and which reason caused the higher cancellations. I tried using different visuals, however, I felt this grid was a better visual. Also, I used a line chart to see delays by month by airline.

Resources used:

I used feedback from my mentor, the material in the lessons and this project walkthrough by Josh:

https://www.youtube.com/watch?v=9xqHA732LMA&feature=youtu.be