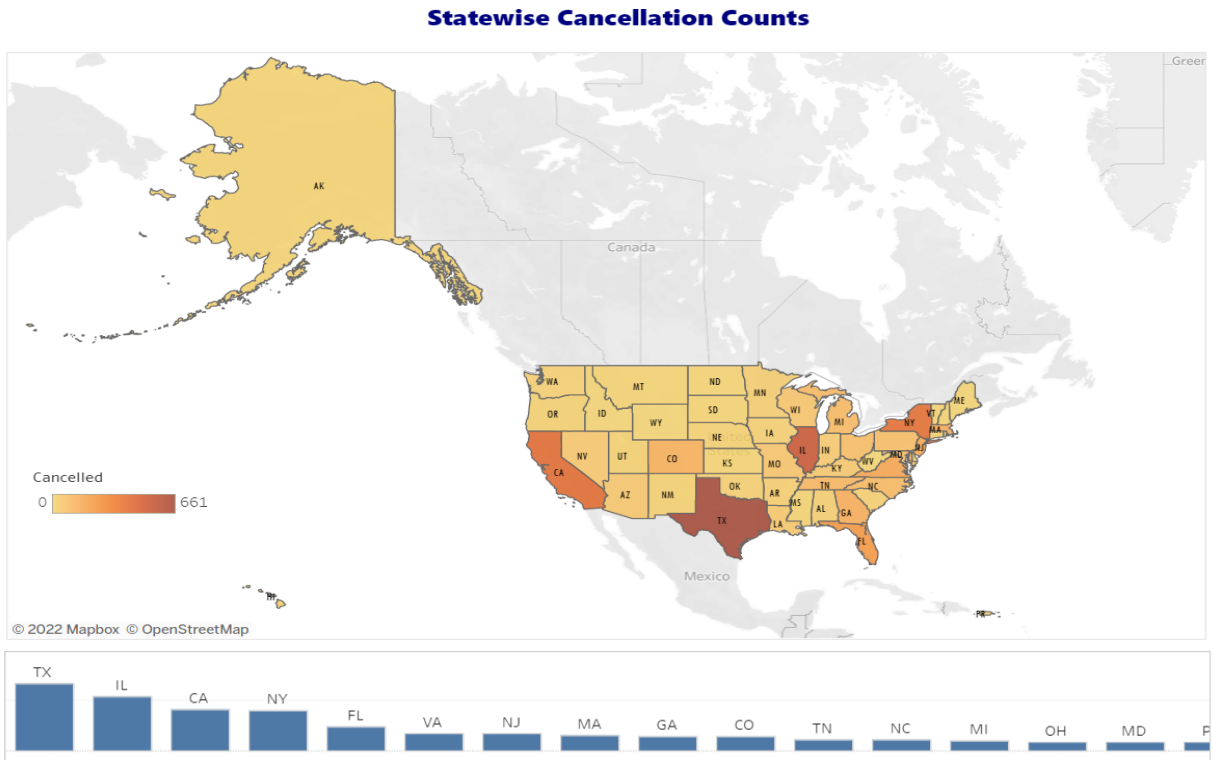
Udacity Visualization Project:

Question 1: Which State is worst affected by frequent cancellations of flight?



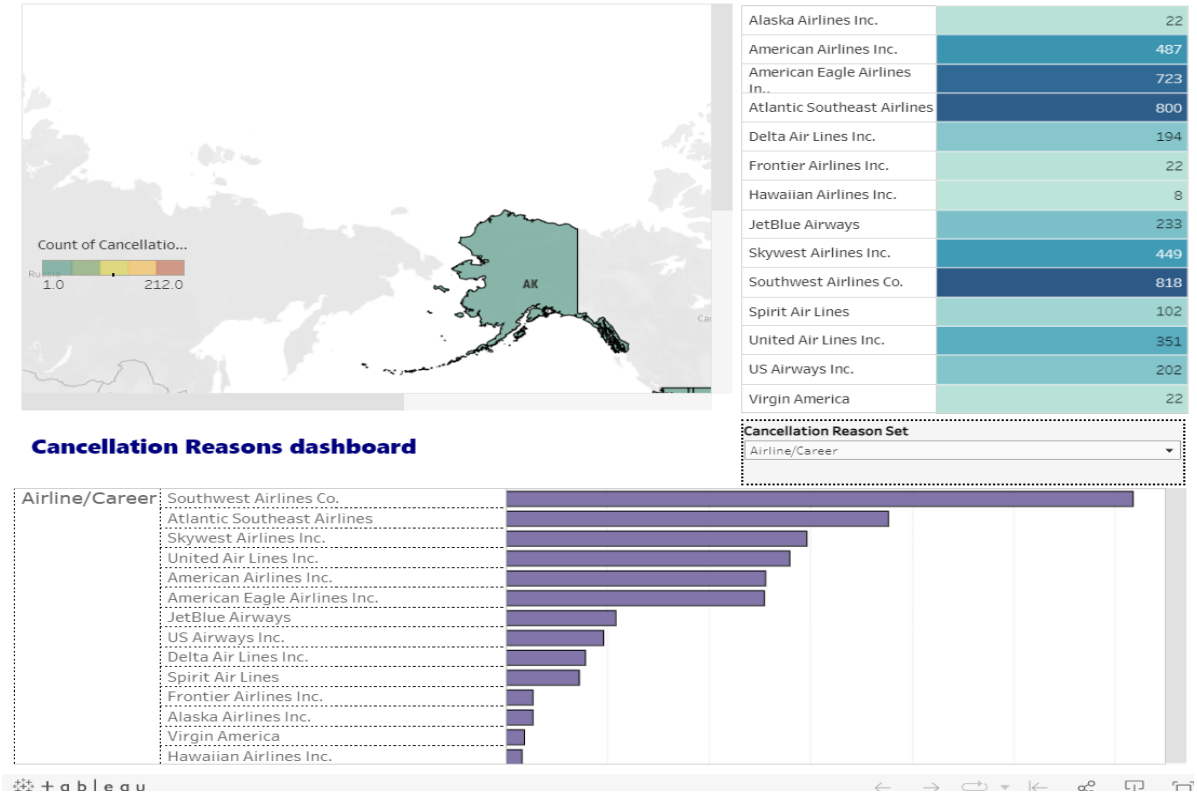
Summary: Flight cancellations are critical to monitor because they have the most impact on both customers and flight operators. The visualization depicts the number of flights cancelled, state-wise. The more flight cancellations there are, the darker the hue in the figure. Furthermore, the bar sub-chart at the bottom of the image shows that Texas has the highest number of cancellations, followed by Illinois and California.

Visualization method: A dashboard comprising of map and barchart has been used. The map is to indicate the geographical data and the bar chart is to make it easy to interpret

Link: StateWiseCancellationCount | Tableau Public

Resources: N/A

Question 2:What impact does each cancellation reasons have on the airline and the state in which it operates?



Summary: Now that we've established that the cancellation will have a negative impact on the airline's operations, we'll investigate the reasons for the cancellation and which airline and state are the most significant factors. Above is a dashboard with three data points. The top right table displays the total number of flights operated by each airline operator. The map on the upper left shows how many flights are cancelled in each state based on a specific region.By filtering each reason for cancellation, we can examine the number of flights that have been cancelled in each state. For example, California has the highest number of cancellations due to airline/career-related reasons, followed by Texas, while Texas has the highest number of cancellations due to weather-related reasons. The bottom bar chart shows the number of flights cancelled by each flight operator as a result of the filtered cancellation reason. For example, Atlantic Southeast Airlines has the highest number of cancellations due to reasons related to national air systems, followed by American Eagle Airlines Inc.

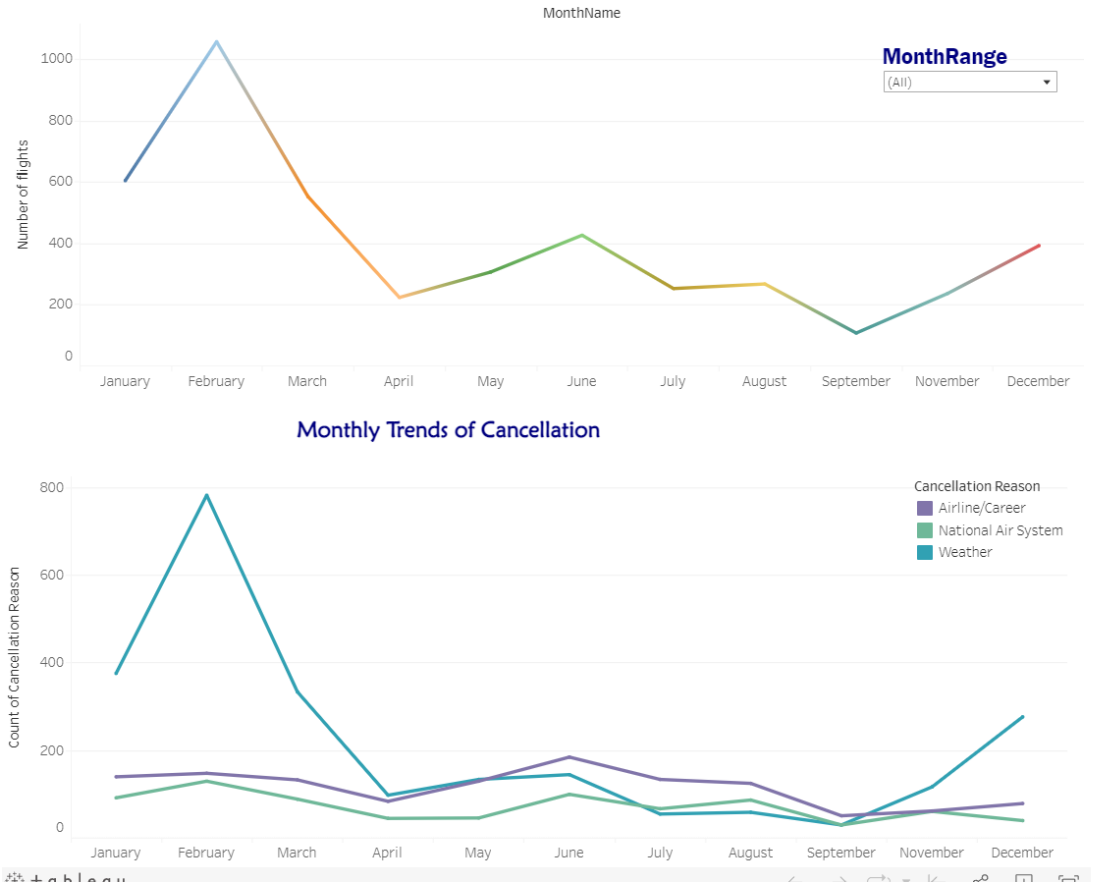
Visualization Method: The table is used to calculate the total number of flights so that any percentages or ratios that need to be calculated can be easily calculated using the data

properly. The map shows how the geographical distribution of cancellation reasons differs by state. The bar chart is straightforward and simple to understand.

Link: [AirlineDashboard | Tableau Public]

References: N/A

Question 3: How to the rate of cancellations change month on month?



Summary: The second question concerns how these cancellation rates fluctuate monthly. We must look for any major wildly fluctuating patterns monthly. The most effective way to convey this information is through a line chart. The graph at the top depicts the number of flights per month. The general trend in the number of flights is as follows: The number of flights peaks in January and February, after which it begins to decline until April. After that, there is an oscillating up and down pattern until December. When looking at the bottom chart, it shows the reason-by-reason trends in the number of flights per month. The purple color denotes cancellation due to 'Airline/Career,' while the green and blue colors denote cancellation due to 'National Air System' and 'Weather,' respectively. We can see that during the month of February, there are a large number of cancellations due to weather, while the other two

reasons are comparatively low. Weather-related cancellations begin to rise again by December. There is an option to filter into a range of months to see if there is any difference between those specific months. For example, the month range 'Apr-June' indicates an upward trend in cancellation rates across all reasons.

Visualization Method: The line chart has been used to indicate the trend of the change with time

Link: MonthlyTrendsDashboard | Tableau Public

Reference: N/A