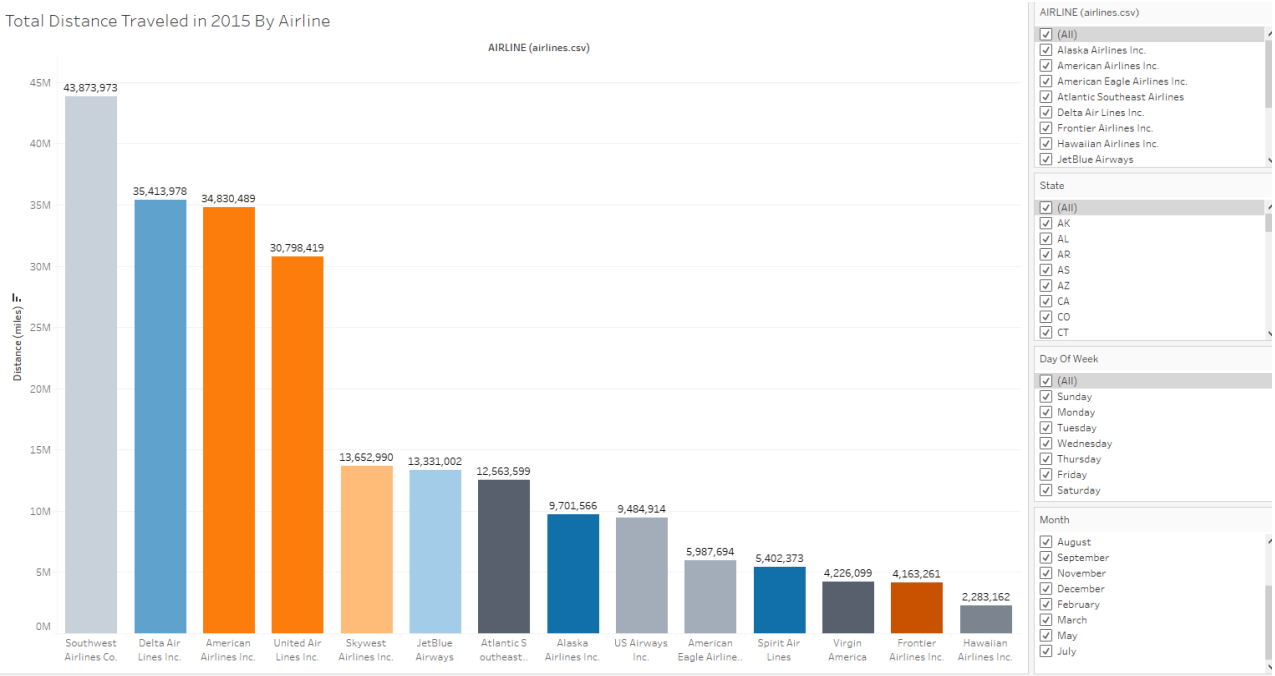
Build a Data Visualization Project 4

Q1: Which airline flew the longest distance in 2015?



Link:

https://public.tableau.com/app/profile/prashant.robinson/viz/DataVisualizationProject4TotalAmountOfFlightsAffectedByWeatherDelaysIntheUSAByState/TotalDistanceTraveled?publish=yes

Summary:

The visual above shows which airline flew the longest distance in the year 2015. According to the bar graph Southwest Airlines Co. flew the longest distance with 43,873,973 total miles flown. I chose to focus on this part of the data because it puts into perspective how much mileage pilots, and crew travel and could be a reason why certain airlines have flight delays. I also included multiple filters which give the viewer the tools to really drill down the data to show longest flight distance by day of the week, month, and even by state.

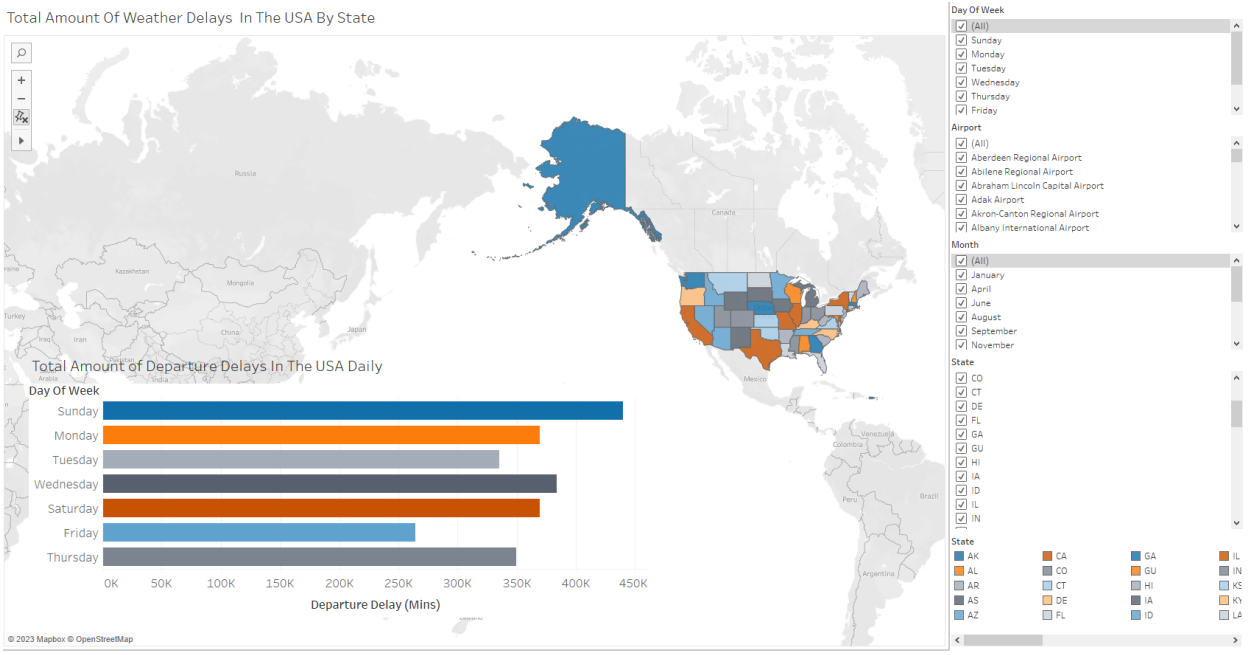
Design:

I chose to use a side-by-side bar graph because it effectively shows the difference in distance traveled between all the airlines. I feel like the viewer will also appreciate the ease of use of the graph and how it can display the data in the simplest of forms. By using the filters viewers can easily answer many different questions such as how far did Southwest airlines fly in the month of March in 2015? How far does Spirit airlines fly on Mondays? etc.

Resources:

https://www.kaggle.com/datasets/usdot/flight-delays/data

Q2: Which states have the most flights delayed by the weather?



Link:

https://public.tableau.com/app/profile/prashant.robinson/viz/DataVisualizationProject4TotalAmountOfFlightsAffectedByWeatherDelaysIntheUSAByState/WeatherDelayDashboard?publish=yes

Summary:

The visualization above is used to show which state has the most delayed flights due to the weather. The state of Texas has the most weather delayed flights across the United States with 23,212 weather delayed flights. You will notice that I have added a filter for days of the week, month, and airline since flights are a daily occurrence and can be heavily affected by weather delays. I have also included a color legend that indicate which state has the most weather delayed flights in the United States. That way visually you can easily compare different states and their weather delay numbers. With this visualization you're able to easily narrow down which day of the week, month, and airline has the most delayed flights due to the weather for the state of your choice. The second visualization, which is the horizontal bar graph shows the total amount of departure delays daily. This visualization is used to convey how many flights are delayed at the departure stage causing other flights across the U.S to be delayed as well. You will notice I also included a filters to narrow down data by airport, month, and airline making it easier for viewers to manipulate the data to answer numerous questions.

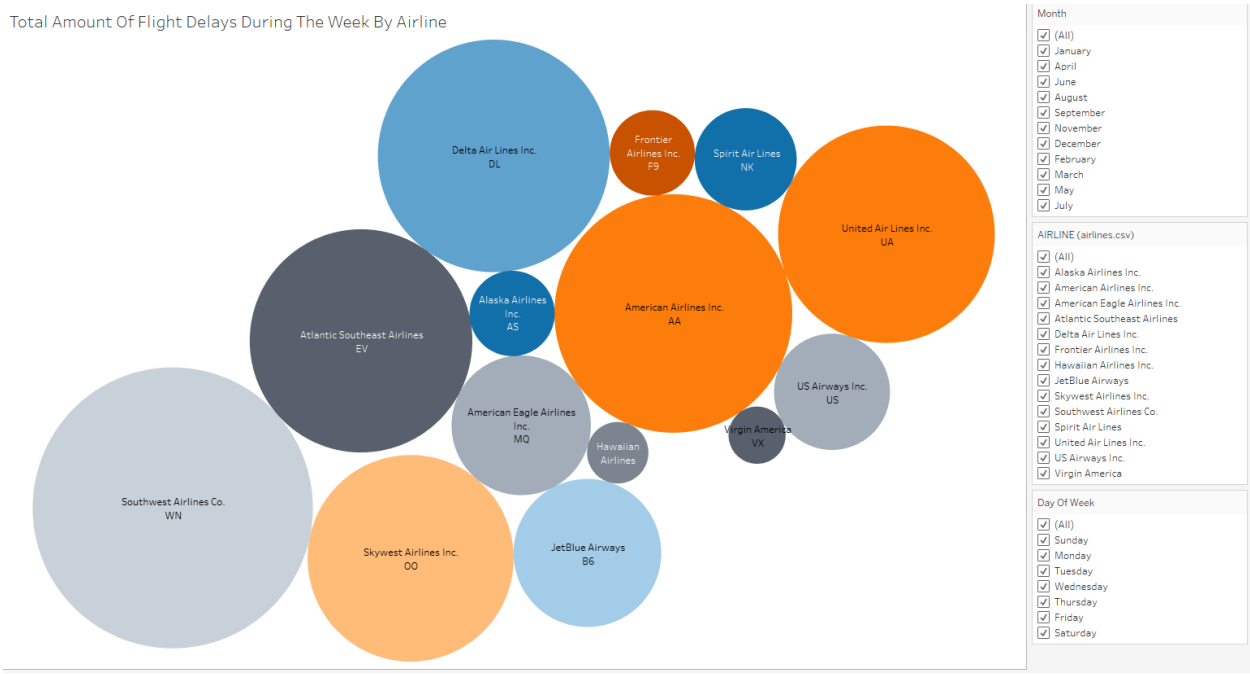
Design:

I used a map for this visualization because it includes great visual elements such as an active map, shading, and it shows the relationship across a specific region. I was able to color coordinate whether a

certain state has a high level of departure delayed flights or a low level of departure delayed flights which makes it simple and easy to read and understand. The horizontal bar graph also displays the number of departure delayed flights that can be filtered to show departure delays by month, airline, days of the week, and state.

Resources: https://www.kaggle.com/datasets/usdot/flight-delays/data

Q3: Which airline has the most flight delays during the week?



Link:

https://public.tableau.com/app/profile/prashant.robinson/viz/DataVisualizationProject4TotalAmountOfFlightsAffectedByWeatherDelaysIntheUSAByState/FlightDelayByAirline?publish=yes

Summary:

The visual above shows which airline has the most flight delays during the week. According to the visual, Southwest Airlines has the most flight delays during the week with a total of 182,670. I chose to visualize this information because it gives a full picture of my data story and shows additional information on how airlines perform during the week. This information could also be helpful when deciding which airline to fly with, since delays could make you late for an important meeting, miss a connecting flight for vacation etc.

Design:

I chose the packed bubbles chart because it accurately shows the link between delayed flights between airlines. The bigger bubbles will illustrate that it has more delays than the smaller bubbles on the chart. It's an easy way to make sure your target audience can understand what I'm trying to show.

Resource:

https://www.kaggle.com/datasets/usdot/flight-delays/data