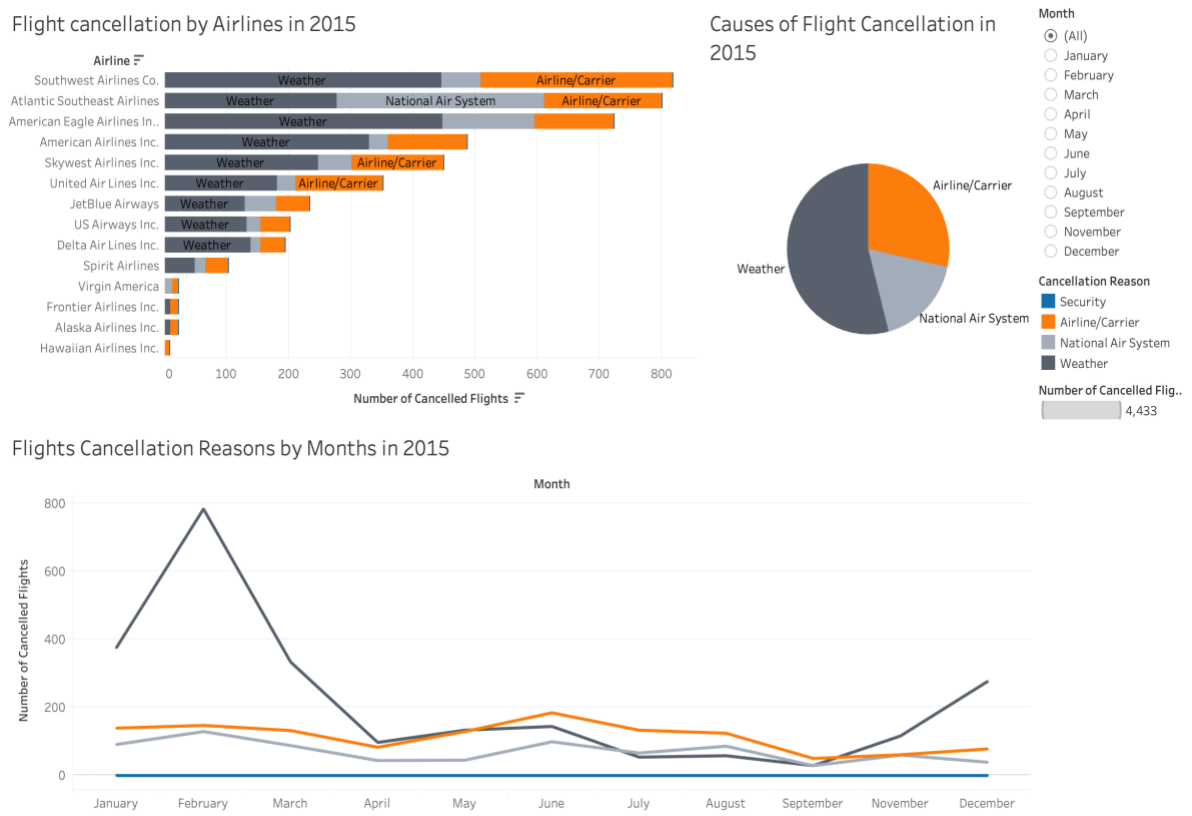


Flight delays and Cancellations in USA 2015

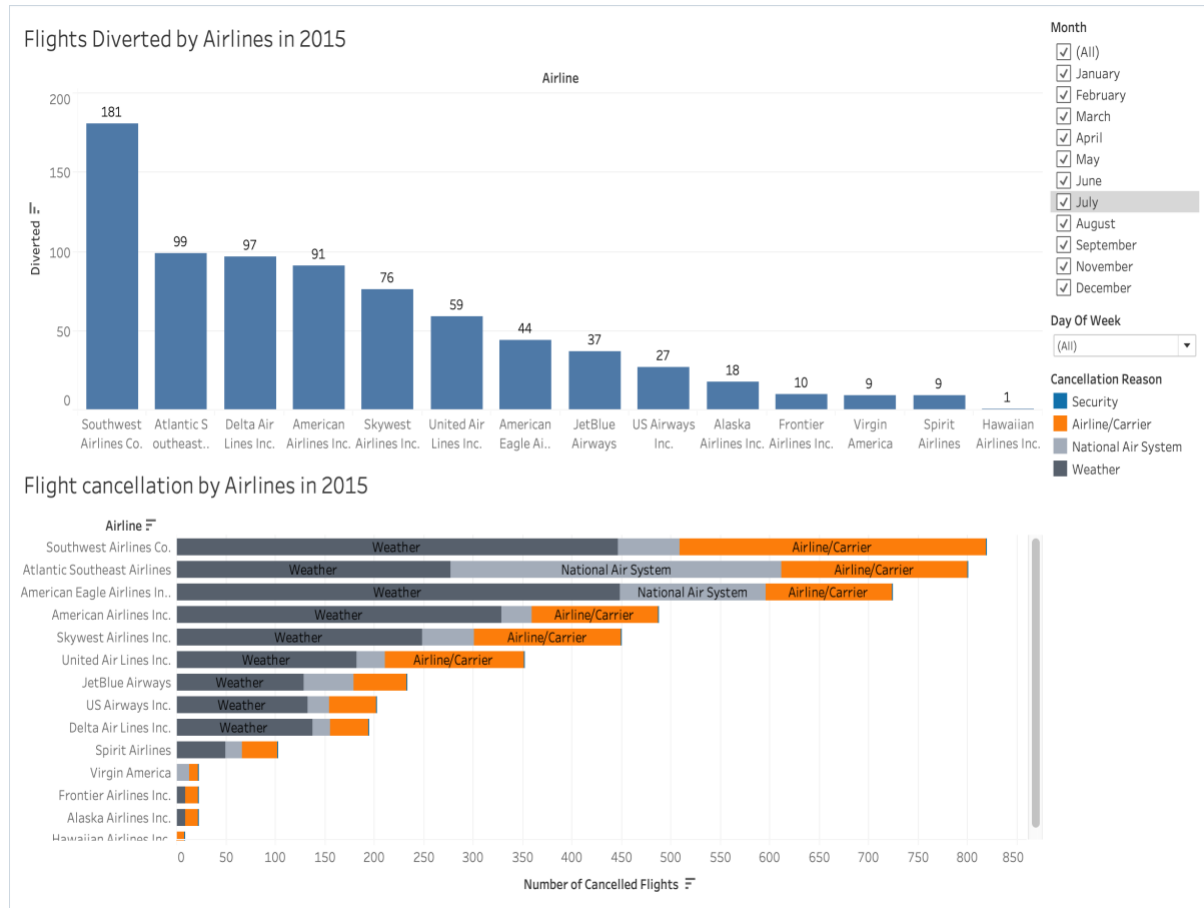
The following project will reveal insights from a dataset visualised on tableau. This dataset contains information on flight delays and cancellations across every city in USA in 2015. To visualise this data, this project requires 3 dashboards to be created with different types of visualizations along with a brief summary on the findings. For this project, the pie chart, bar chart, scatter plot graph and line chart will be used for the visualizations. Here are the 3 visualizations and findings below:

What caused Flight Cancellation in 2015?



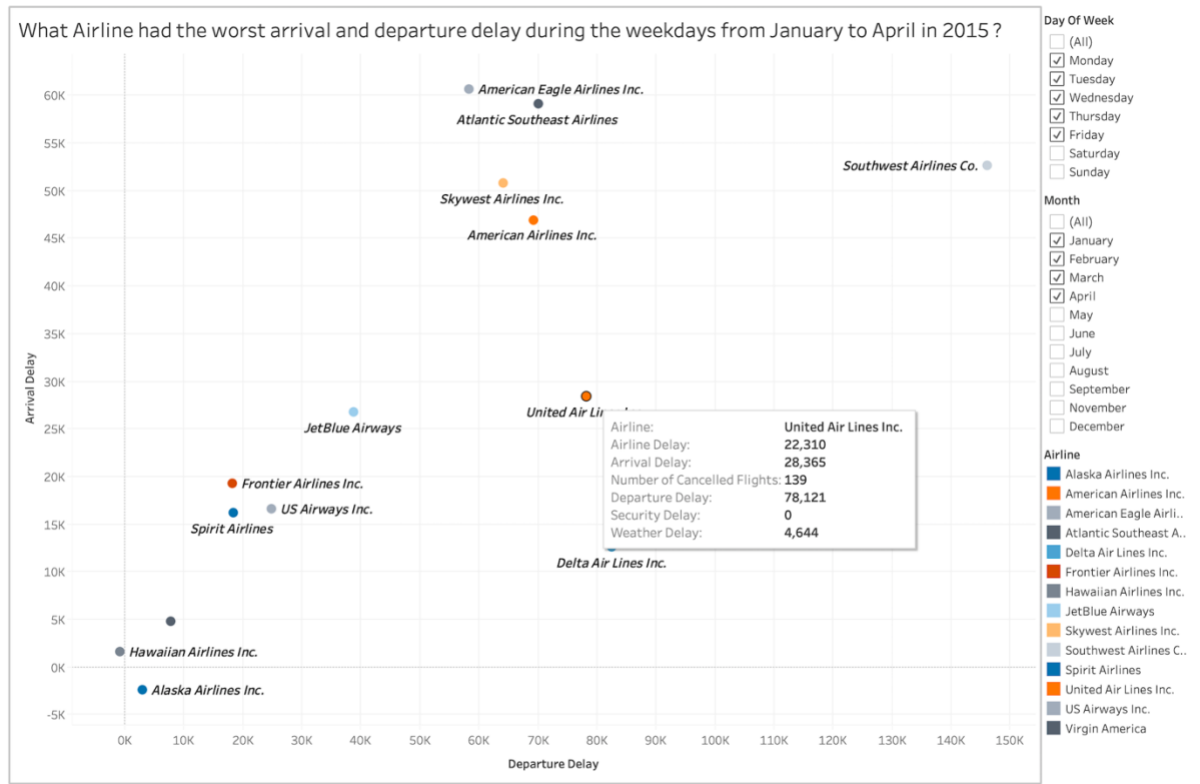
- The pie chart shows that the major reason behind flight cancellation is due to Weather conditions, which is expected. And this is followed by airline/carrier cancellation and national air system.
- Furthermore, it can be seen in the line chart that majority of flight cancellation occurs from January to March, then declines in April and begins to increase in November. This is because of the winter season, which is an adverse period for airlines.
- I used the line chart to observe changes and trend over a short period, which was perfect for visualizing the flight cancellations in 2015. The pie chart was selected to because it was perfect to display and visualize the categories of cancellation reasons since there were only 4 reasons.
- And, I used the colour palettes suited for colour-blindness.

What Airline had the most diversions and highest/lowest flight cancellation in 2015?



- The dashboard above analyses the diverted flights and cancellations of flights by Airlines in 2015.
- From the horizontal bar chart, we can see that Southwest Airlines cancelled the most flights in 2015 because of weather and Airline reasons. While Hawaiian Airlines Inc. had the lowest flight cancellation in 2015 majorly caused by Airline cancellations.
- The vertical bar chart focuses on diverted flights, it can be seen that southwest Airlines diverted most of their flights in 2015. In contrast, Hawaiian Airlines had the lowest flight diversion in 2015.
- A filter was applied to both bar charts to help filter the data by Months, Days of the week and Cancellation reason to reveal other insights. For example, when I filtered the data to check the flights cancelled and diverted from January to February, SkyWest Airlines had the most flights diverted (18 flights), while American Eagle Airlines cancelled the most flights (202) due to weather conditions.
- The bar chart was used to easily understand the frequency of the data and compare numbers between airlines. And I used the colour palettes suited for colour-blindness.

What Airline had the worst arrival and departure delay during the weekdays from January to April in 2015?



- Using the filter again, I was able to develop another question to reveal more insights from this data concerning the arrival and departure delay by Airlines during the weekdays from January to April in 2015.
- It can be observed in the dashboard that American Eagle Airlines Inc. had the worst arrival and departure delay during the weekdays from January to April 2015, followed by Atlantic Southeast Airlines.
- With the help of the tooltip feature on tableau, which can be seen in the screenshot. I was able to add other reasons for delay to the scatter plot chart for every Airline, such as weather delay, security deal and so on.
- The scatter plot chart was used to observe the relationship between Airlines in terms of comparing the arrival and departure delay. And I used the colour palettes suited for colour-blindness.

Links for Dashboard

- First Dashboard:

https://public.tableau.com/profile/adedamola.ahmed.aderonmu#!/vizhome/FlightCancellationDashboard_16119281174830/FlightCancellationDashboard?publish=yes

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- Second Dashboard:
<https://public.tableau.com/profile/adedamola.ahmed.aderonmu#!/vizhome/FlightsDivertedandCancelledbyAirlines/FlightsDivertedDashboard?publish=yes>
- Third Dashboard:
https://public.tableau.com/profile/adedamola.ahmed.aderonmu#!/vizhome/ArrivalandDepartureDelay_16119288358630/ArrivalandDepartureDelayDashboard?publish=yes