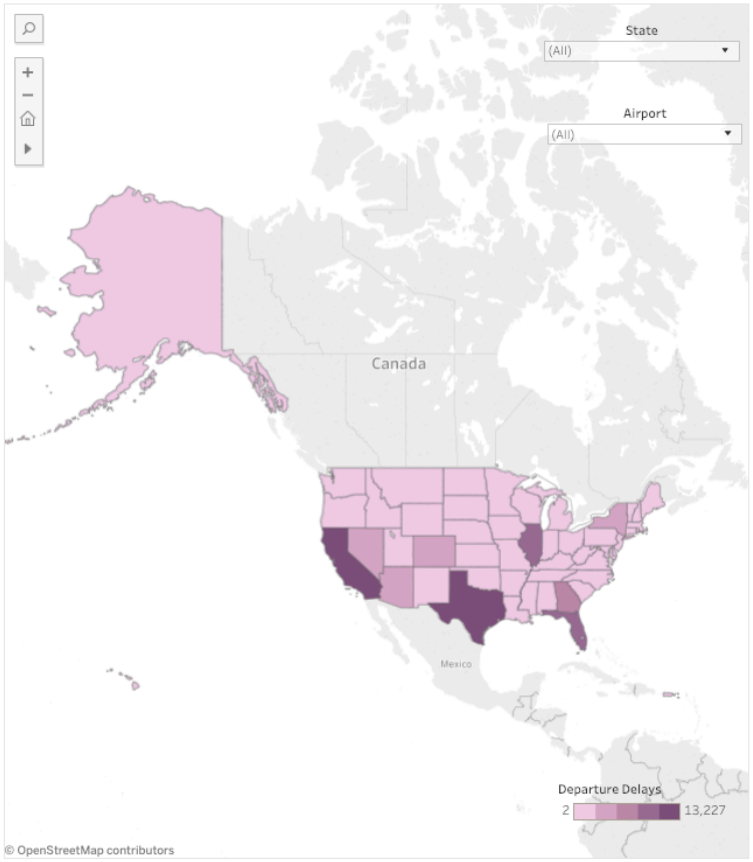
Build Data Dashboards Project | Ioanna Vasilopoulou

UDACITY

States With The Highest Departure Delayed Flights

Departure Delays Per State

Departure Delayed Flights Per State



Total Number of Flights Operated Per State | Table

State	
CA	33,513
TX	32,412
FL	21,339
IL	19,497
GA	18,782
NY	12,881
CO	11,077
AZ	8,626
NV	7,602
NC	7,543
MI	7,176
VA	7,155
WA	6,363
MN	6,147
MA	5,577
NJ	5,459
PA	5,186

Number of Departure Delayed Flights per State

State	
TX	13,227
CA	13,082
IL	8,598
FL	8,233
GA	7,027
CO	4,921
NY	4,644
AZ	3,394
NV	3,176
NC	2,642
VA	2,438
NJ	2,345
WA	2,267
MI	2,207
MD	2,141
MA	1,995
MN	1,880
PA	1,853
MO	1,781

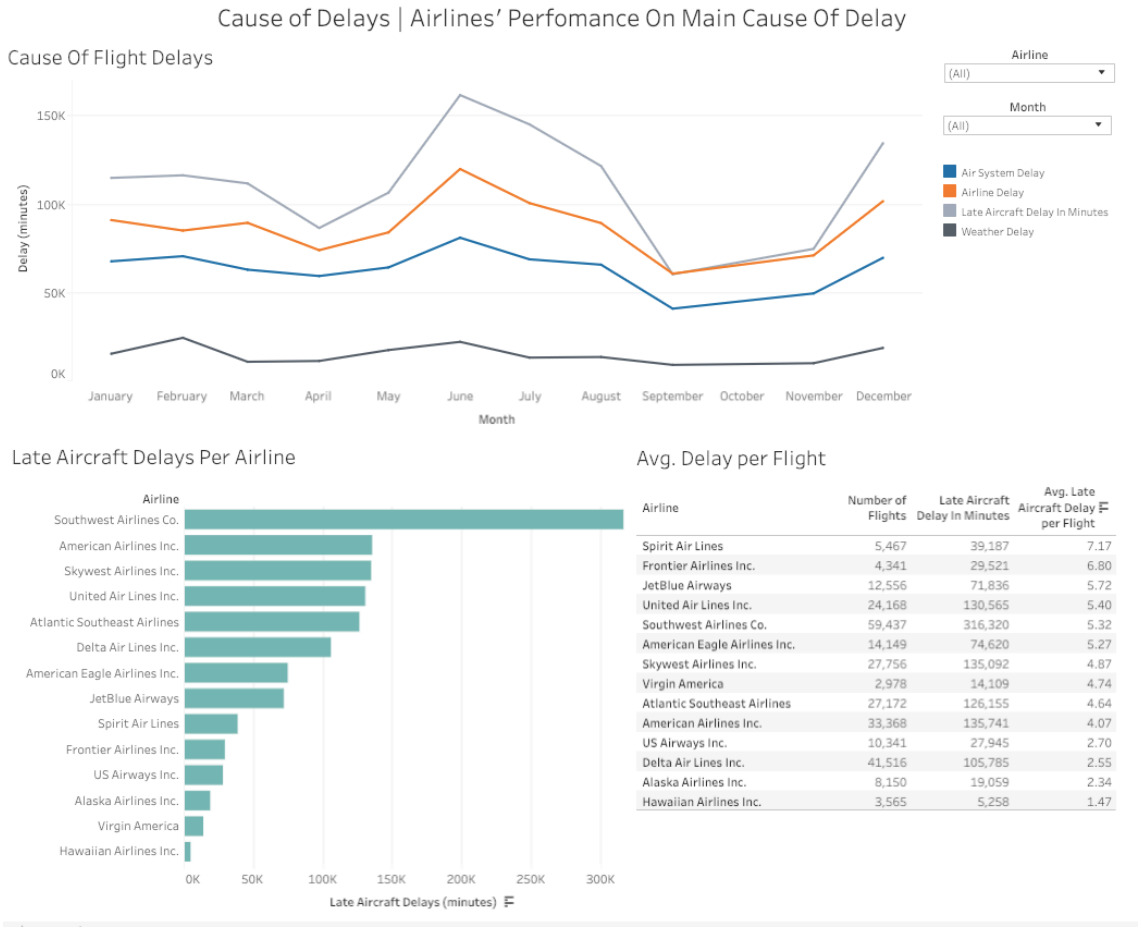
Summary: According to the flight_data.csv file there are 274,964 flights which have been recorded out of which 37.31% (102,608) faced a delay in departure. The 3 states with the highest number of delays are Texas, California and Illinois, with 12.89%, 12.74% and 8.37% of the total delayed flights across the U.S. The states with the lowest number of flights delayed are Guam (14), American Samoa (3) and Delaware at the last place with only 2 delayed flights. However, we notice that although these 3 states have the lowest number of departure delayed flights, the percentage of the delayed flights vs. the total number of flights is higher compared to the states with the highest number of flights / departure delayed flights.

Design: Since our data is built on a geographical location we used a map chart. We only took into account the departure delays that are greater than 0. The additional 2 table charts show the total number of flights operated by state, as well as the total number of departure delayed flights by state. Departure delayed flights count are shown by color intensity per state.

Resources: N/A

Link: https://public.tableau.com/profile/ioanna.vasilopoulou#!/vizhome/FlightDelaysCancellationsBuildDataDashboardsIoannaVasilopoulou/DepartureDelaysPerState?publish=yes

Causes of Flight Delays per Month | Results of No1 Cause of Delay per Airline



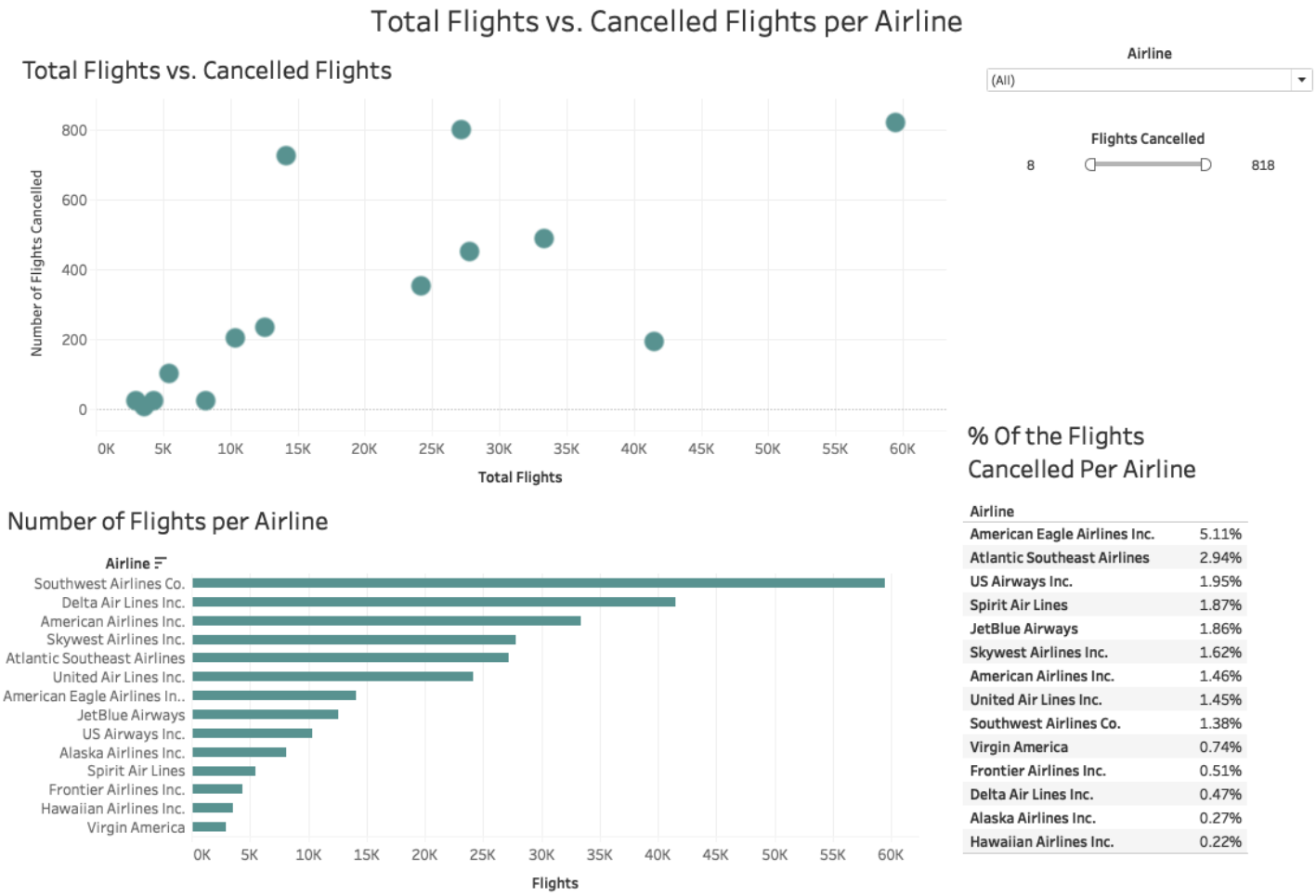
Summary: We have focused on the main causes on delay mentioned on our database. The major cause of delay across all months has been the late aircraft arrival. This is followed by airline delays, delays due to the air system and delays caused by weather. It is worth mentioning that June has been the month when all 4 causes of delay see their highest number of delays (minutes). This might be due to the fact that it is the first month of summer and travellers tend to travel more during this time. After June we notice that the overall delay time is decreasing with the numbers increasing again from late November to December, as this time of the year is really popular, as flights increase due to Christmas period. Focusing on the no1 cause of delay, which is the aircraft arriving late, we can see the airlines with the highest number of delays (in minutes). Southwest airlines is the leader in the late aircraft delays (in minutes), exceeding 316k minutes, which are approximately 5,272 hours. Although American airlines is the second one, it has 57% less minutes in late aircraft delays, with SkyWest airlines being slightly behind with 2,251 hours of delays, overall. Last but not least, we find Hawaiian Airlines with only 5,258 minutes (87 hours) of late aircraft delays. We can see, though, that the airlines with the highest avg. aircraft delay time are not the ones we mentioned earlier. Spirit Airlines, Frontier and JetBlue are on the top of the list with 7.17, 6.80 and 5.72 minutes of delay per flight, respectively. That proves that there is a correlation between the overall late aircraft delay time and the number of flights operated by each airline.

Design: We created a line chart as we need to analyze data over a period of time (months). The colors selected are different, as we are focusing on 4 causes of delays. We selected a bar chart to show the time of delays per airline, selecting descending order by the delays in minutes. The average late aircraft delays per flight are shown on a table, with data being sorted by avg. time of late aircraft delay (descending).

Resources: N/A

Link: https://public.tableau.com/profile/ioanna.vasilopoulou#!/vizhome/FlightDelaysCancellationsBuildDataDashboardsIoannaVasilopoulou/CauseofDelaysAirlinesperfomanceonNo_1causeofdelay?publish=yes

Total Number of Flights vs. Cancelled Flights per Airlines



Summary: In this study we are trying to identify if there is a correlation between the number of flights cancelled with the total number of flights operated by each airlines. On the scatter plot ,we can see that number of flights cancelled is not respective to the number of flights operated by airline. Although the 3 airlines with the highest number of flights are Southwest, Delta and American. However, we notice that the ranking in the cancellation percentages per airline is different as, American Eagle, Atlantic Southeast and US Airways are the airlines with the highest cancellations vs. the number of flights that have been operated by each one.

Design: We created a scatter plot to identify the relationship between the total amount of flights vs. the flights that were cancelled by each one of the airlines in our data base. The bar chart shows us the amount of flights operated by each airline, whereas the table provides us the percentages of cancelled flights by each airline. As the objective is to find any correlation between this data, we have used only one color, as we wanted to focus on the points shown on the scatter box.

Resources: N/A

Link: https://public.tableau.com/profile/ioanna.vasilopoulou#!/vizhome/FlightDelaysCancellationsBuildDataDashboardsIoannaVasilopoulou/TotalFlightsvs_CancelledFlights1?publish=yes