

DATA VISUALIZATION

FLIGHT DELAY IN USA

The data visualization is on the flight delay in the USA in the year 2015. I analyzed the data provided. I joined the three tables; flights, airlines, and airports using inner joins.

I aliased the day of week from 1-7 to Sunday – Saturday. I also aliased the cancellation_reason from A-D to the corresponding cancellation reasons.

I filtered the data visualization by day of week for all the worksheets.

Designs

Shaded map is used because it gives a quick overview of the canceled flight in states. The shade of the color varies to show the different amounts of canceled flights.

Packed bubbles are used because it gives a quick size of cancellation reasons. Different colors are used for the bubbles for easy identification.

Treemaps are used because it easily shows the canceled flights in cities, and it is also used to show departure delays in cities. The shade of the color varies, to show the amounts in descending order.

Bar chart is used because it easily shows the positions of the delay reasons. Only blue color was used, so it does not distract.

Dual line chart is used because it easily shows the relationship between arrival delay and departure delay per day. The lines were coloured for easy identification.

Side-by-side bars are used because it easily shows the positions of the average arrival delay and departure delay per month. The bars were coloured for easy identification.

Highlight table is used because it shows a quick summary of the number of flights canceled by airlines. The shade of the color varies, to show the amounts in descending order.

Insights

It shows the states and the records of their canceled flights. I also used tooltips to show information on departure delays in each state. Texas had the highest canceled flight.

It shows the reason flights were canceled, and most delays were due to the weather. Weather had the highest cancellation reason, followed by Airline/Carrier and then National Air System.

It shows the cities and the amount of canceled flights. The top five Cities with the most canceled flights are Chicago, Dallas-Fort Worth, New York, Newark, and Houston respectively.

It shows the amount of the different delay reasons. The delay reasons in descending order are: departure delay, arrival delay, late aircraft, air system delay, weather delay, and security delay.

I focused on departure delay and arrival delay being the top 2 delay reasons. It shows the arrival delay and departure delay of every day in a month. Day eighteen has the highest arrival and departure delay.

This shows the Cities and the departure delay. I also used tooltips to show information on arrival delays in each city. The top five Cities with the most departure delays are; Chicago, Atlanta, New York, Dallas-Fort Worth, and Denver.

More information on arrival delay and departure delay using their average shown in each month. The sixth month had the highest departure and arrival delay followed by the month of twelfth and second months.

It shows the number of canceled flights by airlines. Southwest Airlines had the highest number of canceled flights.

The state of Texas has the highest canceled flights but the city of Chicago has the highest canceled flight and departure delay.

The reason why most flights were canceled was majorly attributed to Weather. That is a reason which is out of the hands of airlines.

Link:

The link to my story: [Dorcas Ehiede DAND Project 5 | Tableau Public](#)