

## **The story link**

<https://public.tableau.com/app/profile/salha.nasser/viz/Project1uDACITY/USFlightDelaysandCancellationsin2015?publish=yes>

### **Q1): Which states and cities have the most cancellations?**

#### **Summary**

##### **Insight1:**

Which states and cities have the most cancellations?

##### [Dashboard Link](#)

From the dashboard, it is evident that Texas has the most significant number of cancellations, while the city with the highest number of cancellations is Chicago. This may be related to the fact that Texas is the second-highest state in the number of flights, with 11.86 % of the flights going from Texas. Likewise, Chicago is in Illinois state, which has the third-highest number of flights.

#### **Design**

In this dashboard, I used the map to show the different states. I also used the number of cancellations as heat map colours to emphasize the cancellations number over the different states. In addition to this, I created two bar graphs for the cancellation distribution over the states and cities. I also used the week-of-day filter, where I used aliases for the week days name.

#### **Resources**

N\A

### **Q2 Which airlines or airports have the worst delays?**

#### **Summary**

##### [Dashboard Link](#)

In this dashboard, I created a different horizontal bar graph to show the total arrival and departure delay time among the airlines and airports to show the airlines and airports with the highest and lowest delay time.

##### **Insight:**

The Sawyer International Airport have the most delay time, with an average total departure and arrival delay of 173 minutes. On the other hand, the Laramie Regional Airport experienced the

least delays. Most of the average total departure and arrival delays of -10 minutes, meaning the arrival or departure before the scheduled time.

The Spirit Airline experience the largest delays, with an average total departure and arrival delay of 33 minutes. Meanwhile, American Eagle airline has the least delays time with an average total departure and arrival delay of 15 minutes.

### **Design**

I used horizontal bar graphs as the main components since I wanted to show the distribution of the delays among many categories. Also, since I was only interested to see the highest or lowest values, like for the airlines and airports with the most and least delays, I used only the top or bottom 10. For the colours, I used different shades of purple to be consistent with the different dashboards and also to emphasize the bars with the largest value.

### **Resources**

N/A

## **Q3) What is the most cause for cancellation?**

### **Summary**

[Dashboard Link](#)

In this dashboard, I created different plots to show the distribution of cancellations reasons in total, among the different months, airlines and airports.

### **Insight:**

From the pie chart in this dashboard, it's evident that weather is the most causes of cancellation. This also appears in the stack bar chart for the cancellation reasons among months where February has the most cancellation rate due to the weather conditions; this could be related to February in the winter when many ice storms cause the cancellation of many flights.

In airports, the most reason for cancellation is also weather which aligns with the total distribution of cancellation reasons, with Chicago O'Hare International Airport having the highest number of cancellations.

It's surprising that the cause for cancellation for airlines with the most cancellations is not the weather. For example, Authentic Southwest Airlines has the most significant number of cancellations, with the national air system's highest reason for cancellations.

### **Design**

I use stack bars and horizontal stack bars to show the reasons for cancellations. Also, for the number of cancellations, I filter the airline and airports that have more than 50 cancellations. Also, I used a horizontal bar chart to show data with many values.

## **Resources**

N/A