

# Data Visualization Project

## **First insight:**

When Vermont is the origin state of a trip it has the highest cancellation rate amongst the other states with a 4.6 % cancellation rate, while when Delaware is the origin state of a trip it has the highest delay records percentage with a 25% delay record rate, and when Virgin Islands is the origin state of a trip it has the highest diverted trips percentage with a 3 % of its total trips diverted.

**N.B:** Feel free to explore more parameters in the graph using the choose parameter filter including the different causes of delays or cancellation and the average delay times.

## **Type of charts used:**

Here I've used two charts type the first one being shaded map to enable us visualize the location of the corresponding state being investigated, and the second chart I've used a bar chart to enable us to compare between different states based on one parameter at a time.

<https://public.tableau.com/app/profile/muhammad.aidarous/viz/Originstatesanalysis/Originstatesanalysis>

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## **Second insight:**

Examining the American airlines data, I've found that during the year 2015 Southwest Airlines Co. had the most trips with a total of 59,437 trips, on the other hand Virgin America had the fewest trip count with only 2,978 trips.

For the cancellation percentage American Eagle Airlines Inc. had the highest cancellation percentage of a whole 5.1%, while Hawaiian Airlines Inc. had the lowest cancellation percentage of only 0.2 %.

For the delay records percentage Spirit Airlines had the highest delay records percentage with a 29.7% delay records percentage, on the other hand Hawaiian Airlines had the lowest delay records percentage of only 10.8%.

**N.B:** Feel free to explore more parameters in the graph using the choose parameter filter including the different causes of delays or cancellation and the average delay times.

### **Type of charts used:**

Here I've used a bar chart to enable us to compare between different Airlines based on one parameter at a time.

<https://public.tableau.com/app/profile/muhammad.aidarous/viz/American2015flightsanalysis/Airlinesanalysis#1>

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### **Third insight:**

While analyzing the cancellation data, I've found that February trips had by far the most cancellation percentage with a 4.7% cancellation rate while September flight trips had the lowest cancellation percentage with a 0.5% cancellation rate.

Overall, the weather cancellation contributes for most of the cancellation, and National air system cancellation has the lowest influence in cancellation.

Weather cancellation percentage reaches its maximum in February with a with approximately 0.4% cancellation rate and records a minimum rate in September with only 0.001% rate, Airline/Carrier cancellation maximizes in June with a 0.007% rate and minimizes in September also with 0.002% rate, and finally National air system cancellation rates reaches maximum in February with a 0.002% rate and reaches minimum in September also with a 0.001% rate.

Feel free to see the cancellation ratios for different airlines using the airlines filter.

### **Type of charts used:**

Here I've used to line charts to track the variation of a single parameter at a time over time.

<https://public.tableau.com/app/profile/muhammad.aidarous/viz/Monthlycancellationpercentage/Monthlycancellationpercentage?publish=yes>

**N.B:** The dataset in interest misses any October data.