Udacity Project 5: Visualization Dashboard using Tableau

By Bernice Ebhohon

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The data used in this project is the 2015 US Flight Delays and Cancellations Dataset from Kaggle (https://www.kaggle.com/muonneutrino/us-census-demographic-data/data)

Insight 1

Dashboard

Flight Cancellations in USA in 2015 | Tableau Public

This is a dashboard which gives insight to state wise flight cancellation as well as the highest flight cancellations by airline which shows Texas had the highest flight cancellation and when we dug deeper in the second chart, we discovered that Southwest Airlines had the highest flight cancellations.

Design: A map was best suited to plot the state-wise cancellation being a geographical data while a bar chart was used to plot the cancellations by airlines since the information had to be represented to estimate key values at a glance and give an accurate visual check. A sequential blue color to show the degree of cancellations. A month filter was also used to further reveal insights as to what state and airline had the highest and lowest cancellations in each or a range of months.

Insight 2

Reason for Flight Cancellation across All Cities

Reason for Cancellations | Tableau Public

This insight reveals the reason for cancellation across all states. We can see that **Weather** has the most reason for cancellation with a total percentage of **54.07%** while the **National Air System** has the least cancellation reason at **17.51%**. This establishes that most cancellations is not due to human factors but to circumstances beyond control which must be managed to avert several flight risks.

Design: A pie chart was used to see the distribution of flight cancellation reasons as pie charts are used to display the percentage of total in a given distribution. The colors were encoded to differentiate the cancellation reasons. The dark blue represents the cancellation due to weather, the light green represents cancellation due to airlines/carriers while the orange color represents cancellation reason was labelled according to show the sum of cancellation reasons according to the proportion of distribution in the pie chart. A month filter was also included to see the distribution of information for all the months or a particular month.

Insight 3

Relationship between Arrival Delay and Departure Delay

Relationship between Arrival Delay and Departure Delay | Tableau Public

It was necessary to create an insight into the relationship between the average arrival delay and average departure delay. I wanted to find out if delay in arrival will affect delay in departure across airlines. This insight shows a positive relationship between arrival delay and departure delay.

Design: I chose to use a scatter plot which is appropriate in establishing relationship between two variables. The month was also used as a filter to show the positive correlation between the two variables for each month as well as for all months.

Resources

https://help.tableau.com/current/prep/en-us/prep_build_flow.htm

https://youtu.be/HCJtHsdQID4

https://youtu.be/6oSYdwGnliM