BAND Final Project: Flight Delays and Cancellations Dashboard

By: Bushra Alfawaz

Visualization 1: Cancellation Reasons in 2015

Link:

https://public.tableau.com/app/profile/bushra5835/viz/CancellationReasonsin2015/CancellationReasons

Summary:

This visualization shows a pie chart for cancellation reasons of flights in 2015, we can see that the highest percentage for cancellation goes to Weather by having 54%. In the second place, the cancellation because of Airline/ Carrier by having 28%. The least cancellation reason is National Air System by having 18% among other reasons.

Design:

Regarding the chart type, the pie chart has been selected to represent the reasons in terms of percentage of the total for easier comparing among cancellation reasons. Also, for the color, the blue shades have been used to avoid the user being distracting by bright colors instead of focusing on the data, which the darker shades represent the highest percentage while the lighter represent the least percentage.

Resources:

https://www.kaggle.com/usdot/flight-delays/data

Visualization 2: Average Minutes of Delay for Each Reason in US flights in 2015

Link:

https://public.tableau.com/app/profile/bushra5835/viz/AverageMintuesofDelayforEachRe
asonin2015/AverageMinutesofDelay

Summary:

This visualization shows a bar chart for Average Minutes of Delay for Each Reason in US flights in 2015, we can see that the reason that has highest average delay time is delay for Weather reason by around 49 Minutes, which is the same reason for the highest flights' cancellation number. In the second place, Late Aircraft Delay reason by having average delay by around 45 Minutes. The delay because of Airline is around 35 Minutes while the delay because of Security is around 26 Minutes. The least delay average in which close to a Security delay is Air System delay in which around 25 Minutes.

Design:

Regarding the chart type, the bar chart has been selected since we have categorical data and for easier comparison among delay reasons. Also, for the color, the blue shades have been used to avoid the user being distracting by bright colors instead of focusing on the data.

Resources:

N/A

Visualization 3: **US Flight Delays and Cancellations in 2015 Dashboard**

Summary:

This visualization shows a dashboard for US Flight Delays and Cancellations in 2015, which contains a Map for airports with the number of flights delayed and Line charts for the number of flights cancelled per month, and for the number of flights cancelled per day in the selected month. First, from the map we can see the best and worst airports in terms of the number of delayed flights in 2015, the best airport that has the lowest number of delayed flights is King Salmon Airport (AKN) by having 0 delayed flight, in another hand, the worst airport in terms of the highest number of delayed flights is Hartsfield-Jackson Atlanta International Airport (ATL) by having 12,190 delayed flights.

By choosing from the Airline dropdown list, for example, American Airline Inc, we can see the line chart shows the number of delayed flights each month. The month that having the highest number of delayed flights is August with 4,040 delayed flights while having the lowest number of delayed flights in February by having 2,018 delayed flights this month. At the same time, by selecting August month in the line chart, we can see how the delayed flights distributed per day in August in the other line chart, we can see that Monday has the highest number of delayed flights by having 724 flights compared to other weekdays while Saturday has the lowest by having 481 flights.

Design:

Regarding the chart type, the map has been selected to provide better representation for airport location along with the number of delayed flights. The line chart has been selected since we have a comparison with the time series type (month and day) to see how the number of flights changes for an airline per month and day. Also, for the color, the blue shades have been used to avoid the user being distracting by bright colors instead of focusing on the data, which the darker shades represent the highest while the lighter represents the lowest.

Resources:

N/A