Cathy Moy
Udacity Project: Tableau

Flight Cancellations

Visualization #1: Airline with the most Cancellations in terms of time of year in months along with their cancellation reason

Link:
https://public.tableau.com/profile/cathy.moy#!/vizhome/CathyMoyUdacityTableauProjectVisualization1/Dashboard1

Summary:
This visualization is presented as a dashboard to show airlines that experience cancellations and it also features the cancellation reason with the null not included as all values are zero. This visualization gives an idea of which airlines are likely to experience cancellations in general and specifically for the reasons of airline carrier (A), weather (B), and national air system (C) with the use of the filter included. From this visualization, I came up with an observation that Southwest Airlines (WN) recorded the most cancellations with all reasons accounted for and it also recorded the most with the reasoning of (A) airline carrier. This suggests that Southwest Airlines is more likely to have cancellations as their own airline compared to the other airlines listed. To note, I used Data Interpreter for all my visualizations to clean up the data.

Design:
I chose to use a bar chart to display the sum of cancellations from each airline to see the descending order of the airlines with cancellations. Then, I wanted to incorporate a visualization that features time change of flight cancellations and how it varies with the time of year, so a line chart was most appropriate for that purpose. Both worksheets in this dashboard is interactive to show the count of cancelled flights for additional information.

Visualization #2: Count of Cancelled flights that were initially delayed with average time of delays in terms of airline and arrival

Link:
https://public.tableau.com/profile/cathy.moy#!/vizhome/CathyMoyUdacityTableauProjectVisualization3/Sheet4

Summary:
My scatter plot displays each airline with their average airline delay in comparison to the average arrival delay. I noticed in my scatter plot that all average airline delays were higher in value than all of the average arrival delays. This observation suggests that airlines have slightly longer delays of getting the flight out than arrival delays to the destination airport or getting the flight in. My insight goes further to propose that people are more likely to wait at their departure airport slightly more than at their arrival airport with regards to getting on and off the plane as the flight was originally scheduled.

Design:
With comparing two different types of delays by airline, I chose to use a circle scatter plot to showcase the difference of these variables. This scatter plot shows the average airline delay and average arrival

delay side-to-side by each airline. I chose to use the airline dimension as there were too many values for destination airport to properly be able to gain insight from an understandable visualization. I included the count of cancelled for additional information to gain a better understanding of delays and cancellations of flights.

Visualization #3: Cancelled Flights in view of each day of the week

Link:

https://public.tableau.com/profile/cathy.moy#!/vizhome/CathyMoyUdacityTableauProjectVisualization3_0/Sheet5

Summary:

This visualization is presented as a simple workbook that reveals how the day of week may have an influence to cancelled flights. According to my bar chart, the first day of the week had the most frequent amount of cancellations for any airline. I included a tool tip that shares the count of airline delays and then the percentage of delayed flights that were further pushed to be cancelled. I wanted to see how many flights were initially delayed before they were completely cancelled just out of interest. Out of all the days of the week, the percentages I found were all as low as 5% which shows that delayed flights have a very small chance of being completely cancelled.

Design:

I chose to use a bar chart to show the sum of cancelled flights by the day of the week. I kept the x-axis as is to make it easier to compare the day of the week by keeping it in chronological order. I wanted this visualization to be interactive by including a tool tip that has the count of airline delays and a calculated field of the percentage of delayed flights out of the cancelled flights. My calculated field is the division of the count of the measure value of 'Cancelled' and the count of the measure value of 'Airline Delay' as continuous measures.

Additional Information

Airlines

AA: American Airlines

AS: Alaska Airlines

B6: JetBlue Airways

DL: Delta Airlines

EV: Atlantic Southeast Airlines

F9: Frontier Airlines

HA: Hawaiian Airlines

MQ: American Eagle Airlines

NK: Spirit Airlines

OO: Skywest Airlines

UA: United Airlines

US: US Airways

VX: Virgin America

WN: Southwest Airlines