

Write-up: Flight Cancellations Visualization by Maggie Lee

Link to Tableau Public workbooks:

Initial Version:

<https://public.tableau.com/profile/maggie.lee#!/vizhome/TableauStoryFlightData/Story1?publish=yes>

Final Version:

<https://public.tableau.com/profile/maggie.lee#!/vizhome/TableauStoryFlightDataFinal/Storyfinal?publish=yes>

Summary

This data comes from a Kaggle dataset, it tracks the on-time performance of US domestic flights operated by large air carriers in 2015. The focus of this project is on flight cancellation numbers regarding airlines and airport involving most frequent cancellations. The project also shows the frequency of cancellations caused by different reasons in relation with month and day of week.

Design

Chart Type: This project contains bar chart, area chart and map. I chose bar chart to visualize the comparison of the cancellation numbers by airlines, months, week days and cancellation reasons. To visualize the proportion of cancelled flights by airline and the flight cancellation tendency of each airline by month I used the area chart. To find out if the flight cancellation number is related to regions or states I used the map chart.

Visual Encodings: I used color to highlight variables as reasons of cancellation and airlines. After collecting feedback, I optimize my charts using colorblind-friendly palettes.

Layout and Legends: In each chart, I used a filter to serve as an interactive input, which provide the facility to select one or multiple airlines, reasons, months or days. In the map chart readers can interact with the chart by clicking on the points or by using the filter to select one or more airlines. After collecting feedback, I remove the dataset names from the chart, which was showed in the legend.

Feedback

Color: The colors red and green should not be used together, because colorblind people will have difficulty analyzing the graph.

Legend and Layout: dataset names were showed on the charts, they need to be removed.

Resources

Data Link: <https://www.kaggle.com/usdot/flight-delays/data>