Flight Delay Study

Links to Tableau stories:

Story_v1

Story_Final

Summary

This project analyzed the flight data collected from RITA using Tableau. The purpose of the this project is to communicate with readers some interesting findings from the flight delays data using data visualizations.

Design

- Flight Delays Data Overview

As the first section of my Tableau story, I use bar plots to display the top 10 carriers and top 10 airports that have the most flight delay time in minutes. Bar plots are efficient for comparing univariate variables.

- Distribution of Flight Delays Causes

After getting some general ideas about the data, I plot a pie chart to illustrate the causes of flight delays. The most significant cause of delay is late aircraft delay (40.88%). It is a potential topic for future study to find the reason of late aircraft. Security delay has only a small portion (0.12%).

- Delay Cause Breakdown by Month

To get a closer look of the flight delay causes, I plot the delay data breakdown by month using a line plot. It is clear to see how flight delay change with time. For all five causes, the peak of delay time is at June.

- Worst and Best Airport in June

From previous analysis we know June is the worst month for flight on time performance. Therefor I plot the map of major airports in the US. I use the size of the circle to represent the time delayed. From the map I found the best airport is PDX (Portland International Airport), and the worst airport is ORD (Chicago O'Hare International Airport).

Feedbacks

Versions	Positive Feedback	Suggestions
First	• Created and plot standardized variables (average delay time et al.) • Appropriately choose the visualization tools	• Some axis labels are not accurate • It will be better for readers to understand your story using concrete titles.
Second	• The storyline is clear and easy to follow. • Labels and marks are concise but clear. Shown and only shown necessary information	• For the last sheet (Worst and Best Airport in June), I suggest to set the color opacity to around 80% to see overlapped datapoint

References

Understanding the Reporting of Causes of Flight Delays and Cancellations

Show and Hide Individual Mark Labels

Adding Filters to Dashboards

Calculating Percent of Total for Measure Values