Udacity Data Foundations Nanodegree

Project: Build Data Dashboard

Resources:
No resources were used in the creation of this project.

Design:
From a design standpoint, a soft shaded green blue colour for the map, and solid blue colour for the bar chart and the line graph allows to discover the data without the distraction that numerous bright colours might cause. For this reason this colour palette is used for the three visualisations.
Maps were used to provide overall snapshots. A bar chart and a line chart were used to provide monthly insights. The line chart was used to show a trend, in this particular case it was an increase (dashboard 2).

Summary:

Insight 1: Cancelled flights per US states vary depending on the time of year

https://public.tableau.com/profile/sabrina.palis#!/vizhome/CancelledFlights_29/Dashboard1?publish=yes

The dashboard showcases two maps and a bar chart.
The first map shows the overall cancelled flights average per US state. Vermont, in dark blue, is the state with the overall highest average of cancellations (0.4469). However, this map is only an overall snapshot and doesn't allow to see differences in the time of year. Further exploration of the data per month by means of a bar chart reveals interesting discrepancies depending on the time of year. For instance, in December the states with the highest average of cancelled flights are Maine (0.0556) and North Dakota (0.05333) whereas in January, it is Vermont (0.04469) and Rhode Island (0.03255). However, in July, the state with the highest average of cancellation is West Virginia (0.04878).

Insight 2: Average security delays in US flights particularly high in Florida

https://public.tableau.com/profile/sabrina.palis#!/vizhome/Securitydelays/Dashboard1?publish=yes

The dashboard allows us to explore the security delays in flights across the US with a map, and further exploration of the case of Florida.
The map shows the average security delay per US state. Florida is the one state with the highest security delays (663) which strongly contrast with states that have none such as its neighbouring state, Alabama.
The map doesn't allow us to see the variation in time. Exploration by means of a line chart provides further insight. Average security delays vary depending on the month of the year in

Florida. It seems worth noticing a first increase from February (0.00) to July (0.1565), a slight decrease, and then a dramatic increase from August (0.0437) to October (0.5946).

Insight 3 Average departure delays in US flights greatly vary across the states

https://public.tableau.com/profile/sabrina.palis#!/vizhome/Averagedepartureddelay/Dashboard1?publish=yes

The dashboard explores the average departure delay per state dataset and allows us to make an interesting point about designing visualisation. Even when the dataset is about location, a map is not always the best way of displaying data. In this particular case, the map doesn't provide a clear view of departure delays, which is the reason why a bar chart was added to the dashboard. The bar chart seems much more legible and makes the differences easy to spot. It clearly shows differences across the states. For instance, the highest average departure delays occur in American Samoa (50.50), and Delaware (34.83), while the lowest are found in Hawaii (3.17), Montana (4.45), and Alaska (5.18).