Data_viz project - Flight Delays and Cancellations

visualization #1

link:

https://public.tableau.com/app/profile/omar.mk/viz/flights-delayP/Dashboard1?publish=yes

summary:

1. What is the most frequent causes of delays?

-Late Aircraft Delay is the most frequent and it means: That a previous flight with same aircraft arrived late, causing the present flight to depart late.

followed by Airline issues.

-Security issues come in last place.

2. which Airlines faced many problems or canceled the most flights?

-WN Airlines had tough times canceling 818 flights.

-compared to HA Airlines that had only 8 canceled flights.

But this can be misleading as WN may be dealing with higher traffic airports or different stats

3.What stats have the most delays and cancellations?

-Texas has the most by 668 flights canceled

-then Illinois with 563 and California with 408 flights

* By filtering this viz by Airline we find out that WN airlines canceled flights in California

Which has a lot of air traffic

-compared to HA airlines that canceled flights in Hawaii

4. does time affect delays and cancellations?

-it is obvious that there is higher [Cancellations] rate in the first three days of the week and the first three months of the year

- also, that [Departure Delay] rate hits the max around the mid-year months

* As a small conclusion you could consider taking a flight in September on day at the end of a week,

To avoid delays and cancellations.

Design comments:

In the airline/cancelation chart:

 used horizontal bars because we have many airlines then I wanted to add a light color, so it was orange with a blue border for a little contrast.

In the line chart:

 blue line shows the [Departure Delay] rate and red/thick parts indicate [Cancellations] rate

visualization #2

link:

https://public.tableau.com/app/profile/omar.mk/viz/airtime_16480504509720/airline?publish=yes

summary:

-What is the top 10 airlines in terms of airtime?

WN airline is at the top again followed by DL, AA, UA…

visualization #2

link:
https://public.tableau.com/app/profile/omar.mk/viz/top10airports/topbusyairportsovermonths?publish=yes

summary:

-What is the top 10 busy airports over different months?

The observation that the percentages change a bit, but they remain at the top

Design comments:

Used color-blind friendly color palette

This data comes from a Kaggle dataset, it tracks the on-time performance of US domestic flights operated by large air carriers in 2015.

Resources:

- Udacity Advanced Data Analysis Nanodegree.
- Project walkthrough: https://www.youtube.com/watch?v=9xqHA732LMA&feature=youtu.be
- Data: https://www.kaggle.com/usdot/flight-delays/data