TABLEAU

TABLEAU LINKS:

Initial: https://public.tableau.com/shared/FDRRWCJXW?:display_count=yes
Final: https://public.tableau.com/shared/MYPZNJ69K?:display_count=no

SUMMARY:

The graphs and illustrations in the Tableau show air traffic handled by 2 of the US's busiest airports in 2008, ORD (Chicago) and ATL (Atlanta). Through the various visualizations, it can be seen that ORD and ATL are responsible for the most total delay. United Airlines (UA) and American Airlines (AA) seem to be the cause of most of the delays at these airports, especially at ORD! Finally, these 2 airports (like most others in the US) experience maximum total delays on Friday.

DESIGN:

1. To start with, I wanted to show the airports on a world map to give the reader some perspective. Here I used the bubble size and green color hues to reflect the traffic at the top 10 airports.

2. Next, to give the user a better understanding of the relative traffic, I decided to use a bar chart for the same 10 airports. Here I used hues of blue to encode the delay times. In order to create such a variable, I added the arrival and departure delays. I ordered the data in a descending manner. ORD and ATL stood out because they were in the top 3 for air traffic and their bars were extremely dark blue. I changed the name 'Origin' to 'Airport' for clarity.

3. Next, I decided to see which airlines were responsible for the delays. To facilitate this, I used a stacked bar chart with the airports as the stacks in the bars. This gave me a very clear picture of how much each airport was delayed by each of the top 5 airlines in terms of total delay.

4. To further strengthen my analysis and findings, I searched for the top 5 airports with the most cancellations, and found ORD and ATL there again! This graph was simple in color so that the reader doesn't have to work as hard to analyse this story point as much as the other story points.

5. Finally, I decided to analyse which days of the week had the most delay time, which I found to be Friday. I originally plotted this as a small series for the top 10 airports. Once again, ORD and ATL emerged at the top, giving a great conclusion to my analysis!

6. Legends and labels have been used to clarify on all my illustrations. Tooltips convey necessary information and can be viewed on mouse hover.

7. Annotations on most graphs gives more information about the illustration.

FEEDBACK:

After my initial thoughts, I showed my illustrations to my sister, and boy the feedback helped so much! Here were her pointers:

1. Suggestion: The original map had size encoded as both bubble size and color hues.
   My sister pointed out that the color did not add any extra information, and was in fact confusing.
   Implementation: I changed the color of the dots back to black. Now only the size encoded the airport traffic.

2. Appreciation: She appreciated the blue hues in the second graph, because they DID add extra information!

3. Suggestion: All axes for time delays were in seconds. My sister felt minutes were better for readers.
   Implementation: I created a new variable that displayed total delay time in minutes.

4. Suggestion: The map actually contained 9 values, while the title read 10.
   Implementation: Somehow, I had missed putting SFO. I rechecked and added it to the map.

5. Suggestion: The titles of the story points were very dry, and did not seem to convey a story.
   Implementation: I changed the titles to make a better narration, and edited the titles and added them as annotations to the plot.

6. Suggestion: The small series was very confusing in the fact there was a lot of information divided into small regions.
   Implementation: I overlaid a certain number of airports on a single graph, and added color to separate them visually. A mean line was also displayed for convenience.

The feedback turned out to be very helpful!

RESOURCES:

None