1- Insight: Flight Cancellations

Link:

https://public.tableau.com/app/profile/ahmad1020/viz/FlightCancellations_16444445921530/CancelledFlightsOverview?publish=yes

- **From this map we can see the most flight cancellation occurred at Texas (3,340 flights) and then Illinois (2,815 flights)**
- **The lowest flight cancellation occurred at Montana (15 flights) and West Virginia (15 flights)**
- **There are four states with zero cancelled flights (Delaware, Guam, Virgin Island and Delaware)**
- **From bar chart we can see the most states and cities with most cancellations.**

A map is best suited here as I had to plot state-wise flight cancellations which involves **geographical data**. I used a **sequential blue color** wherein the darker the blue color, more the number of flight cancellations. This type of coloring makes it easier to quickly spot which states have **high/low cancellations**.

I added a **state** filter so that readers can dig which **city** has the highest and lowest cancellations in each State.

2- Insight: Cancellation Reasons Overview

Link:

https://public.tableau.com/app/profile/ahmad1020/viz/CancellationReasonsOverview/CancellationReasonsOverview?publish=yes

- **We can see easily from the Pie chart that the most cancellation reason is weather (that cause cancellation of 11,985 flights)**
- **Second reason is Airline/Carrier (that cause cancellation of 6,300 flights)**
- **The lowest reason is National Air System (that cause cancellation of 3,880 flights)**
- **From Line chart we can see tha weather of winter cause most Cancellations (3,910) occurred at February, then occurred at January (1,875) and at December (1,380)**
- **Most cancellations occurred by Southwest Airlines (4,090) most reasons of these cancellations are weather and airline itself.**
- **Most cancellations occurred due to National Air System are by Atlantic Southeast (1,675)**
- **Most cancellations occurred at Chicago international airport (2,270)**

A Pie Chart is best suited here as I had to show flight cancellations Reasons and percentage of each reason that cause flight cancellations.

I used a Stacked bars charts as I had to determine which Airport and Airline have the most Flight Cancellations . This type of chart makes it easier to quickly spot proportions of each cancellation reasons for each Airport/Airline.

A line chart can easily show cancellation reasons how vary by time of year.

I added a **cancellation reason** filter so that readers can dig which **reason** has the highest and lowest cancellations in each Airport/Airline.

3- Insight: Flight Delays

Link:

https://public.tableau.com/app/profile/ahmad1020/viz/FlightDelays_16444448712230/FlightDelays?publish=yes

- **This map show the average arrival and departure delay in each airport overall the country, the highest delay with red circle and the lowest delay with blue color**

- **From this map we can see the most flight Delay occurred at Sawyer international airport, Although it has only 60 filghts.**

- **Scatter plot show that there are many airports with earlier departure and arrival before scheduled time and minus value.**

A map is best suited here as I had to plot Airport-wise flight Delays which involves **geographical data**. I used a **sequential red-blue color** wherein the darker the red color, more the flight arrival/departure delay. This type of coloring makes it easier to quickly spot which Airport have **high/low delay**.

4- Insight: Delay Reasons Overview

Link:

https://public.tableau.com/app/profile/ahmad1020/viz/DelayReasonsOverview/DelayReasonsOverview?publish=yes

- **From Pie Chart we can see easily reasons of delays.**
- **The most reason is Late Aircraft delay with average delay 23,74.**
- **The second reason is Airline delay with average delay 18,59.**
- **The Third reason is Air System delay with average delay 13,46.**
- **The lowest reason is Weather delay with average delay 3,16 that indicate weather may cause mostly cancellation than cause delay of flight.**
- **The most delay time caused by Aircraft occurred mostly in summer Vacations season (June, July and August) and winter season with highest no of flights that could justify this delay.**

A pie Chart is best suited here as I had to show flight delays reasons and percentage of each reason that cause flight delays.

A line chart can easily show delay reasons and how vary by time of year.

I added a **delay reason** filter so that readers can dig which **reason** has the highest and lowest delay in each month.

5- Insight: Delay/Airline

Link:

https://public.tableau.com/app/profile/ahmad1020/viz/DelayAirline_16444453742080/DelayAirline?publish=yes

- **At this dashboard we use bar, line and scattered plots that show easily more information about airlines and flight delays.**
- **Spirit Airlines have the worst delays that caused by aircraft and air system delay.**
- **Hawaiian Airlines have the lowest delay that caused by aircraft and air airline delay. Although they have the lowest number of flights they have the worst airline delay.**
- **American Eagle airlines have the most delay caused by weather.**
- **Security delay is the lowest reason caused delay and the most month with highest delay is November at Alaska and Hawaiian airlines.**
- **The best airline is Southwest airline with average delay 10.43 although they have the highest no of flights 297,185 flight**

I used a scattered plot as I had to determine which airline has the most flight delay . This type of chart makes it easier to quickly spot proportions of arrival/departure delay for each airline.

A bar chart show easily which airline has the worst delay accordingly to each delay reason.

A line chart can easily show delay reasons and how vary by time of year.

I added a **delay reason and airline** filters so that readers can dig which **reason** and **airline** has the highest and lowest delay in each month.

6- Insight: Delay/Airport

Link:

https://public.tableau.com/app/profile/ahmad1020/viz/DelayAirport/DelayAirport?publish=yes

- **From this map we can see that Sawyer international airport have the worst Delays with only 60 flights. Weather can justify these delays**
- **Scattered plot show that Bellingham international airport has the lowest delay with 125 flights.**
- **Yakutat airport has the worst security delay.**
- **Line chart show reasons of delays per month.**

A map is best suited here as I had to plot Airport-wise flight Delays which involves **geographical data**. I used a **sequential red-blue color** wherein the darker the red color, more the flight arrival/departure delay. This type of coloring makes it easier to quickly spot which Airport have **high/low delay**.

I used a scattered plot as I had to determine which airport has the most Flight Delay . This type of chart makes it easier to quickly spot proportions of arrival/departure delay for each airport.

A Line Chart can easily show delay reasons and how vary by time of year.

I added a **delay reason and airport** filters so that readers can dig which **reason** and airport has the highest and lowest delay in each month.

7- Insight: Flight Delays and Cancellations

Link:

https://public.tableau.com/app/profile/ahmad1020/viz/FlightDelaysandCancellations_16444456425030/Story1?publish=yes

- **This story can summarize all dashboards which tell us cancellation reasons and most airports have the highest cancelled flights over year 2015, and map can be used easily to determine states and their location.**

- **Also this story can summarize what part of the flight causes the most delays? Do these causes vary by airport or time of year?**

In this story I used maps, scatter plots, line charts, stacked bar charts, pie charts and bar charts to show more findings and makes it easier to quickly spot of relationship between variables.

Also, I added filters so that readers can dig more to finds relationships between single variable easier.