

## **Insight 1: Flights Delay Dashboard**

- **URL:**

<https://public.tableau.com/app/profile/abdelrahman6715/viz/FlightsDelayOptionsDashboard/DelayDashboard?publish=yes>

- **Summary:**

From this dashboard, we can see the worst and best in term of any type of delay (by your choice) for airline, airports and across date variables.

It seems that according to the **arrival delay** option **Southwest Airline Co., Chicago O'Hare International Airport** (as a destination airport) and **30 Dec** had the most delay by **289,992, 98,900** and **25,881** respectively.

Also this dashboard is designed to be dynamic to interactively choose different type of delay, zoom in a specific time period, control the top number of airport appears in the visual and choose a specific airline and airport.

- **Design choices:**

The visualizations in the dashboard is designed to maximize the data-ink ratio by removing chart junks that distracts from pointing the message.

Color encoding to highlight values that span from negative to positive values.

Also, maintaining high design integrity and selecting color pallet for color blindness.

## **Insight 2: Flights Cancellation Dashboard**

- **URL:**

<https://public.tableau.com/app/profile/abdelrahman6715/viz/FlightsCancellationDashboard/16732983047370/CancellationDashboard?publish=yes>

- **Summary:**

From this dashboard, we can visualize the total cancelation for each reason across date, airline and state.

It appears that **Southwest Airline Co.** had the most cancellation by total **818** flight cancellation.

**Texas** state had the most total cancellation by total **661** flight cancellation.

**27 January** had the most total cancellation **125** flight cancellation for the weather reason, also it seems that the **winter** season has the most cancellation time across all the year.

The **weather** reason had the most total cancellation across all the reasons by **2,397** flight cancellation.

This dashboard is designed to be interactive so you can dive deep for any specific date period across all the year. Also, every visual in the dashboard acts as a filter to choose any specific state, airline and cancellation reason and the dashboard will be updated upon your choice.

- **Design choices:**

The visualizations in the dashboard is designed to maximize the data-ink ratio by removing chart junks that distracts from pointing the message.

Color encoding for the different reason to highlight the graphs for the different categorical variable.

Also, maintaining high design integrity and selecting color pallet for color blindness.

## **Insight 3: Causes of Delay Story**

- **URL:**

<https://public.tableau.com/app/profile/abdelrahman6715/viz/Causesofdelaystory/CausesofDelay?publish=yes>

- **Summary:**

From this story, we can track the possible factors that mostly affects the flights delay. It seems that there are some airlines has total delay much greater than other such as **Southwest Airline Co.** followed by **Atlantic Southeast Airlines** by **289,992** and **187,908** total arrival delay respectively.

Also it appears that there is correlation between the total delay and the total distance and diverted flights across the different airlines, the correlation seems to be positive.

The are certain months appears to have delays greater than others such as February and June by 179,573 and 248,586 total arrival delays respectively.

The destination and origin airports also seems that certain airports had delays much greater than others such as **Chicago O'Hare International Airport** followed by **Dallas/Fort Worth International Airport** (destination airport) by **98,900** and **63,052** total arrival delay respectively.

**Chicago O'Hare International Airport** followed by **Hartsfield-Jackson Atlanta International Airport** (Origin airport) by **200,115** and **167,006** total departure delay respectively.

- **Design choices:**

The visualizations in the story is designed to maximize the data-ink ratio by removing chart junks that distracts from pointing the message.

Color encoding to highlight values that span from negative to positive values.

Size encoding to highlight the total diverted quantitative variable in the scatter chart.

Also, maintaining high design integrity and selecting color pallet for color blindness.

## **Resources**

- **Parameter control:**

<https://www.youtube.com/watch?v=rJsaezoTVAE>

<https://www.youtube.com/watch?v=CrfEJ24FWpQ&t=6s>

<https://www.youtube.com/watch?v=wC-W31N6a2o>