

PROJECT 1: FLIGHTS AND CANCELLATIONS ANALYSIS USING TABLEAU

BARIS SUSLU

The skills I used in this project:

- Data Analysis Using Tableau
- Building Worksheets and Dashboards Using Tableau
- Connecting Tables Using PK and FK Using Tableau
- Creating Categories with Pivoting Using Tableau

About the Dataset:

The data I used in this project is from Kaggle dataset. The U.S. Department of Transportation's (DOT) Bureau of Transportation Statistics tracks the on-time performance of domestic flights operated by large air carriers. Summary information on the number of on-time, delayed, canceled, and diverted flights is published in DOT's monthly Air Travel Consumer Report and in this dataset of 2015 flight delays and cancellations.

For raw data please visit the following link:

<https://www.kaggle.com/datasets/usdot/flight-delays>

Dashboard #1: Delays Dashboard

For the dashboard #1 please visit the following link:

https://public.tableau.com/app/profile/baris2293/viz/DelaysDashboard_16757797717540/DelaysDashboard?publish=yes

Average Total Delays per State Map: The map shows the different average total delay times of each state. By hovering over each state, the information about the name of the state and the exact average total delay information can be gathered. States are added as 'Multiple Values dropdown filter' on the right side of the map and users can filter specific states compare their average delays. The range between average delays are customized (0.00 – 20.00) to be able to see the color differences between the highest and lowest point better.

Average Total Delays per Months and Airport: The graph shows the average total delays graph to different months. With this graph users can see and compare the different delay trends for each airport. By hovering over each month, the exact average total delay information can be gathered. Airports are added as a filter so users can choose each airport that they want to compare and see the trends in average total delays. The months are adjusted from 1 – 12 for correct visualization. For the above example Pittsburg International Airport and Ronald Reagan Washington airport are filtered.

Delay Categories Chart: The chart shows the total minutes of delays for each delay category. From the chart users can have more information about each delay type for each airport. To be able to create the delay categories, columns for delay categories are pivoted in data source. By doing this, every single started to have 4 different rows for each delay category. The newly created 2 new columns (from pivoting) are named as 'Delay Reason' and 'Delay Time'. Multiple-value dropdown filter is added for Airports and for this example Baltimore - Washington, JFK and Seattle - Tacoma Airports are chosen.

Dashboard #2: Flight and Cancellations Dashboard

For the dashboard #1 please visit the following link:

https://public.tableau.com/app/profile/baris2293/viz/FlightsCancellationsDashboard_16757798522100/FlightsandCancellationsDashboard?publish=yes

Number of Flights per Month Map: The map shows the number (count function) of flights from each state. By hovering over each state, the information about the exact number of flights from that state and the count of airports in that state can be gathered (count of airports are added as a detail). The months are added as a range of values slider filter so that the users can select a specific range of months to see the number of flights in that specific period. Airports are also added as a multiple values dropdown filter so that the users can view the number of flights from specific airports. The range for number of flights are left as automatic intentionally so that the range and map colors change when the month slider is adjusted.

Number of Cancelled Flights to Months Graph: The graph shows the number of cancelled flights to months for all states and for all airports. From the graph users can see the trends at the number of cancelled flights (e.g., For overall, there is much more cancellation during winter months than summer months.) The filters for airports and cancellation reasons are also added as filters so that the users can filter each airport or cancellation reason. The months are adjusted from 1 – 12 for correct visualization.