Tableau Project
US Flight Delay and Cancellation 2015

Dashboard link

https://public.tableau.com/profile/disha6012#!/vizhome/disha_tableau_project/Airline_DASHBOARB

Story link

https://public.tableau.com/profile/disha6012#!/vizhome/disha_tableau_project/Airline_story?publish=yes

Dataset: Inner join between flights csv file and airport csv file. Provided aliases for Airlines column in flights csv file with help of airlines csv file.

Insight 1 Average Distance Covered by Airline

https://public.tableau.com/profile/disha6012#!/vizhome/disha_tableau_project/Avg_dist_airlines

From visualization we can observe that the maximum average distance was covered by Virgin America airline (1419.1) and the minimum average distance was covered by America Eagle Inc. airline (423.2) in 2015.For passengers who wish to travel long distances without any layovers can prefer America Eagle Inc. airline.

Design: For this visualization, I used horizonal bar chart with blue color as selecting multiple colors for bars would only distract the viewer. Hovering on the bar will show the Average distance travelled by airlines.
I used a Bar Chart for this visual as this chart type is very effective for comparisons across categories.

Insight 2 City with maximum Flight Cancellations

https://public.tableau.com/profile/disha6012#!/vizhome/disha_tableau_project/city_max_cancel

From visualization we can observe that the city with maximum number of flight cancellation is Chicago (11.55%) followed by New York (7.33%) for the span of first 6 months in 2015. For the second half of the year cancellation percentage for Chicago increased (14.89%) while for New York (4.89%) it decreased in 2015. The reason for maximum number of flight cancellations in Chicago could be because it's a metro city with high air- traffic.

Design: For this visualization, I used percentage of total sum value of cancellation using symbol maps chart with dots color as blue. I added month filter and airlines filter. With the help of month filter we can change the start and end point.

Insight 3 Reason Behind Cancellation

https://public.tableau.com/profile/disha6012#!/vizhome/disha_tableau_project/Reason_cancel

From visualization we can observe that the reason for cancellation of flight is mainly because of "Weather" (2397 cancellations i.e. 54.07 %) followed by "Airline/Carrier"

(1260 cancellations i.e. 28.42) and then "National Air system" (776 cancellations i.e. 17.41%) in 2015.Using month filter we can observe that during winter period number of flight cancellations is more while for summer period it is less.

Design: For this visualization, I used heat maps chart to show relational value in percentage of total count value of cancellation. I added filters "Cancellation Reason" and month. I also added aliases
A - Airline/Carrier
B - Weather
C - National Air System

Insight 4 Average Delay of Airlines

https://public.tableau.com/profile/disha6012#!/vizhome/disha_tableau_project/Avg_delay_airlines?publish=yes

From visualization we can observe the Average delay of Airlines in 2015.Hawaiien Airlines Inc (22.712) had maximum delay and Virgin America (13.119) had minimum delay. Using month filter we can observe that during Summer vacation time and Christmas holiday time the average delay in flights increases.

Design: For this visualization, I used Packed Bubbles to show relational value of average delay in airlines. I added month filter also.

Dashboard:

In dashboard, I added two worksheets, City with maximum Flight Cancellations and Reason Behind Cancellation. The month filter was applied to all sheets with related data source. Tooltip was used in all.

External Resources

Walkthrough youTube

Tableau Tutorial

https://medium.com/@mosesandersonong/data-visualisation-of-flight-delays-with-tableau-40aa6abf676b