

Project 04 – Build Dashboards

TOPIC: FLIGHTS DELAYS AND CANCELATIONS

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PROJECT DESCRIPTION

- This project has the purpose to reveal three insights from a chosen dataset, when I will create a data visualizations (worksheets and dashboard) that tell a story revealing patterns using Tableau;
- Chosen Dataset: [Flights Delays and Cancelations](#)

1. Insight I: Total Airline delay in minutes

- **Summary:** This visualization provide insights about the question “Which airlines have the worst delays?”. To execute this task I have joined the flights and airlines files (using the key *Airline = IATA Code*), I created the calculates field which I called *Total Delay that sums Arrival Delay and Departure delay* ($Total\ Delay = [Arrival\ Delay] + [Departure\ Delay]$).
- Analyzing the plot, I found that *Southwest Airline Co* has the highest delay time of 931.259 minutes and *Hawaiian Airline Inc.* was the company that has lowest minutes on delays, with 7.082 minutes as total delay time.
- **Design:** I have chosen the horizontal chart because it is suitable to communicate in an explanatory way (visual appealing) the Insights related to the analysis according to the data (Airlines and Minutes).
- I chosen the blue color for this plot in order to make sure that is accessible for everyone, this color works for people with colorblindness.
- **Link:**
- <https://public.tableau.com/profile/nelio7373#!/vizhome/TotaldelayminperAirlineChart/TotaldelayminperAirlineChart?publish=yes>

2. Insight II: Reason of flights delays (min) of Airlines over Time(months)

- **Summary:** This visualization provide insights about reasons of flights delays (in minutes) for airline overtime (months). This plot allow us to understand and plan actions in order to in increasing the productivity of any airline and decrease delays.
- To design the plot I have joined the flights and airlines files, and after that, I have created a trend-stacked chart with multiple variables. For this plot, I put the months as rows, the minutes per measure name (late aircraft delay, security delay, airline delay, air system delay, and weather delay) as columns and the airlines and months as filters. For this plot, we can select the airline, and quickly see the total delay of flights of each reason like late aircraft, security, weather, etc. according to the [dataset](#).
- We can see from the visualization that, in June 2015 all the companies listed on the dataset companies had highest minutes of delays all KPIs, “Airline Delay”, “Air System Delay”, “Arrival Delay”, “Departure Delay” and “Whether delay”
- **Design:** I have chosen area stack chart to visualize this Insight II, because this graph is suitable for exploring the trend overtime for more than two variables.
- The graph is in Blue color only in order to avoid distractions and due the fact that this color works well for people with colorblindness.
- **Link:**
- <https://public.tableau.com/profile/nelio7373#!/vizhome/ReasonsofFlightDelayminsofAirlinesovertime/months/ReasonsofFlightDelayminsofAirlinesovertime/months?publish=yes>

3. Insight III: Multiple analysis of delays (min) per Airline, reason of delay and measure name (departure vs arrival) comparison;

- **Summary:** This visualization provide a Dashboard that presents the 04 analysis , first the Total Airline delay in minutes, second, the Average Departure Delay (min) over time(month) per airline and third the Reason of flight delay of airline over time and forth Cancelled flight per Airline.
- **Design:** For these plots Silver and I chose the Blue colors only to avoid distractions and because these colors works well for people with colorblindness.
- **Link:**
https://public.tableau.com/profile/nelio7373#!/vizhome/TotalAirlineDelay_15856541449700/AnalysisofdelaysonAirlines?publish=yes

4. References

- 4.1. [Project 04 Introduction by Udacity](#);
- 4.2. Marketing Analytics Nanodegree [Video] - Lesson 4 : [Data Visualizations in Tableau](#) – Marks & Filters;
- 4.3. Marketing Analytics Nanodegree [Video] - Lesson 5 : [Building Dashboards and Stories with Trina](#) & [My First Tableau Story by Josh](#) (Marketing Analytics Nanodegree Mentor) – Make Dashboards and Stories in Tableau;
- 4.4. Dataset and Metadata description: <https://www.kaggle.com/usdot/flight-delays/data#flights.csv>.
- 4.5. Tableau Community : <https://community.tableau.com/message/281108#281108>