

# Data Visualization with Tableau

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## Summary:

The project mainly focused on analyzing the data related to the Titanic ship sank in the North Atlantic Ocean in 1912 after colliding with an iceberg, killing more than 1,500 of the 2,224 passengers aboard.

In this Data Visualization project the main focus was to analyze the survival rate of passengers based on several conditions. The conditions used were:-

- Gender
- Age Groups of passengers
- Travel Class they belonged to.

In the beginning the main focus was to determine the total number of passengers on boarded Gender-wise. Then different factors like age, travel class etc was mixed with above data to get a clearer picture. All these factors were mixed up with the number of people survived / dead at different stages to obtain the Survival/Death rate.

## Design:

Throughout the visualization **red** and **blue** colors were used to differentiate between male and female gender. Apart from these **light blue**, **light green**, **light violet** and **light red** were also used to design the dashboard headers.

- **Objective:** The main objective was to keep a consistent color encoding to make it soothing to the reader's eyes for reading the plots.

The whole story was divided into four parts where each and every one of them forms a separate dashboard. Each slide of the story consists of two graphs and a table. The first graph shows the passenger's status plot before the accident and the second plot shows the status after the accident that is the survival and death rates.

- **Objective:** This predictability helps the viewer develop the story as they read through the slides to arrive to the conclusion I aim to deliver.

In this project bar charts are mainly used with the percentage as labels in them. The use of bar charts makes things easier to understand and also provides a better way to represent grouped data. The Y axis shows the count of onboard passengers and the X axis is limited to either age groups or travel class depending upon the requirement.

Tabular data is also used to represent the statistical visualization in a better readable format.

- **Objective:** Bar charts are always good to represent comparison between counts/frequency of occurrences of multiple categories.

## Feedback:

I have shared my initial version project on twitter and I got some feedbacks. Below are the feedbacks that I received and the changes I made:

- The plots were congested and hence the outcome was not predictable.
  - Changed the width of the plots, provided legends to them, to make it readable better.

- The summary table was not properly visible with other plots in one single dashboard.
  - Four individual dashboards were created and all the summary sheets were transferred to four different dashboards paired with four plots.
- The color combinations were not good enough.
  - The color for female changed to pink and light blue for male.
- Graphs are plotted based on age groups but the age groups were not highlighted in the presentation. This lead to confusions.
  - Age groups were added in the tooltip so that the reader is well acquainted about what the story is all about.

Link to my tweet where the project has been shared :

[https://twitter.com/WAR\\_MUFC/status/984575757191020544](https://twitter.com/WAR_MUFC/status/984575757191020544)

## Resources:

The dataset used in this project was selected from the [Data Set Options](#) by Udacity. It has been cleaned further as follows:

- Creating a new categorical feature: "AgeGroup", as follows:
  - Child: 1-15 years old,
  - Teenager: 16-20 years old,
  - Adult: 21-35 years old,
  - Middle Age: 36-59 years old,
  - Senior: 60+ years old
- Creating a new categorical feature: "PassengerClass", as follows:
  - FirstClass: 1,
  - SecondClass: 2,
  - ThirdClass: 3,

## Project Versions:

Link to tableau project before Review:

[https://public.tableau.com/profile/gayerike.guha.thakurata#!/vizhome/Titanic\\_Project\\_Final/DiggingDeepintoTheTitanicDataset-SurvivalRatesofOn-BoardPassengersBasedonGenderAgeandTravellingClass](https://public.tableau.com/profile/gayerike.guha.thakurata#!/vizhome/Titanic_Project_Final/DiggingDeepintoTheTitanicDataset-SurvivalRatesofOn-BoardPassengersBasedonGenderAgeandTravellingClass)

Link to tableau project after Review:

<https://public.tableau.com/profile/gayerike.guha.thakurata#!/vizhome/DataVisualizationProjectonTitanicData/DiggingDeepintoTheTitanicDataset-SurvivalRatesofOn-BoardPassengersBasedonGenderAgeandTravellingClass>