Project: Create A Tableau Story

Initial version: https://public.tableau.com/views/DataViz-Titanicdataset/Story1?:embed=y&:display_count=yes&publish=yes

Final version: https://public.tableau.com/views/DataViz-Titanicdataset_improved/Story1?:embed=y&:display_count=yes&publish=yes

Summary

Data Visualization has been created to convey the information about comparison of various proportions related to survival of passengers who were traveling on that fateful. We will attempt to answer following questions with this visualization.

- Was there a difference in proportion of people who survived and people who did not?
- Was the survival related to gender of the passenger?
- Was the survival related to class in which passenger was traveling?
- Did Age of the passenger affect the survival?

Design

To answer the questions that we posed in summary, we used five visualizations.

Design choices before feedback

1) A Stacked bar chart is used to visualize the proportion of passengers who survived and who did not.
2) A Mosaic chart is used to compare the survival rates based on gender. Mosaic chart is appropriate visualization when we want to see relation between two categorical variables: Survived and Sex.
3) A Highlight table is used to compare the survival rates based on gender.
4) A Mosaic chart was used to compare the survival rates based on passenger class. Mosaic chart is appropriate visualization when we want to see relation between two categorical variables: Survived and Pclass.
5) A Boxplot is used to compare the distribution of age of people who survived and distribution of age of people who did not.

Design choices after feedback

1) A Pie Chart is used to visualize the proportion of passengers who survived and who did not. It was realized after the feedback that stacked bar chart, though technically correct, was not conveying the meaning to the viewer.
2) A Mosaic chart is used to compare the survival rates based on gender. Annotations were added to make Mosaic chart explanatory.
3) A Highlight table is used to compare the survival rates based on gender.
4) A Mosaic chart was used to compare the survival rates based on passenger class. Annotations were added to make Mosaic chart explanatory.

5) A Boxplot is used to compare the distribution of age of people who survived and distribution of age of people who did not.

Feedback

Feedback was collected from two persons. Both of them were explained about the purpose of visualization.

Feedback 1:

- Person could not understand what the charts were trying to convey.
- Stacked Chart and Mosaic Chart did not convey any meaning to the person.
- Automatic marks that appear on visualization were inadequate in explaining the purpose of graph.
- The person could understand only highlight table clearly.
- It was interesting to note that these charts were difficult to understand even in presence of legend.

Feedback 2:

- Person could understand what the charts were trying to convey after few questions.
- Person suggested that pie chart would be a better option over stacked chart for proportion of survival.
- Automatic marks that appear on visualization were inadequate in explaining the purpose of graph. After explaining these visualizations, he could understand the charts.
- The person too could understand only highlight table clearly.
- He suggested that more information should be added to Mosaic plots.
- It was also suggested that Survival status should not be represented by 0 and 1. Rather Yes and No should be used. Similarly, passenger class should be used rather than Pclass.

I think both the feedback points to the idea that first version of tableau was exploratory and not explanatory.

Resources

1) Data Visualization in Tableau by Udacity
2) Investigating a dataset, Udacity Project by Trushit Vaishnav