

EXERCISE-2

Exploratory data analysis using Titanic Dataset from Kaggle

Summary for hypothesis 1-

It is true that passengers who were in higher class cabins had an increased likelihood of surviving the disaster because they were granted priority access. This hypothesis was verified through both coding and visualization. Additionally, the statistical analysis demonstrated that the survival rate for passengers in class 1 was 0.629630, which was substantially greater than the survival rate of 0.242363 for those in class 3. This conclusion is further supported by the bar graph, where the bar for class 1 is the tallest, followed by class 2 and then class 3.

Summary for hypothesis 2-

The hypothesis that women and children had a higher chance of survival compared to men during the ship evacuation is true, as observed from both statistical analysis and visualization. The survival rate for women and children was 0.69, which was significantly higher than that of men. The pie chart also revealed that 68.8% of women and children passengers survived, while only 31.2% of men passengers survived. Although there was a minor difference of 0.2% between the code and plot, this can be disregarded as both the coding and visualization confirmed that women and children had a higher survival rate than men.

Summary for hypothesis 3-

The hypothesis that children had a higher chance of survival than adults is valid. The statistical analysis indicated that the survival rate for children was 0.5398230088495575, whereas the survival rate for adults was 0.36118251928020567. These figures demonstrate that children had a significantly higher survival rate than adults. Additionally, the bar graph visualization illustrated that children had a higher survival rate than adults.