

Executive Summary

This project looked at the Titanic dataset to understand what factors affected who survived. We cleaned the data by filling in missing ages with the median value and did some visualizations to test out some hypothesis.

Main Findings:

1. Passenger Class:

First-class passengers had a much higher chance of survival compared to those in second and third class. This may be because first-class passengers were in safer parts of the ship or had more resources.

2. Gender:

Women were much more likely to survive than men. This supports the "women and children first" rule that was followed during the emergency.

3. Age:

The effect of age was less clear. Very young and older passengers had higher survival rates than those in the middle age groups. When we grouped ages, it became clear that being very young or very old made survival more likely.

Conclusion:

The analysis shows that a passenger's class and gender played key roles in survival on the Titanic. Age also mattered, but in a more complicated way. The plots and statistics clearly support these findings and help us understand the different factors that influenced survival during the tragedy.