

Titanic Dataset – EDA Report

1.Executive Summary

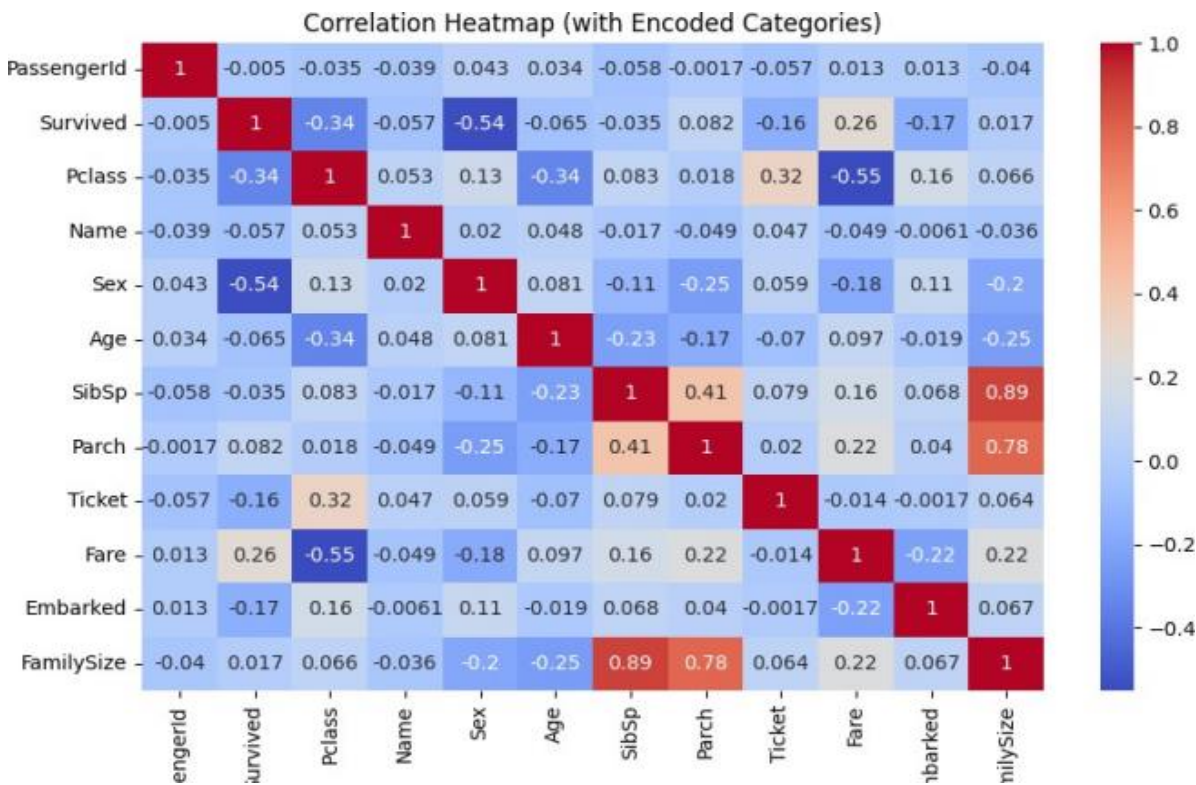
This report presents an Exploratory Data Analysis (EDA) of the Titanic dataset. The objective is to understand the factors affecting passenger survival rates, analyze patterns, and highlight key statistical insights.

2.Dataset Overview

The Titanic dataset contains information about passengers including their age, sex, passenger class, fare, and survival status. We have performed data cleaning, handled missing values, and prepared it for analysis.

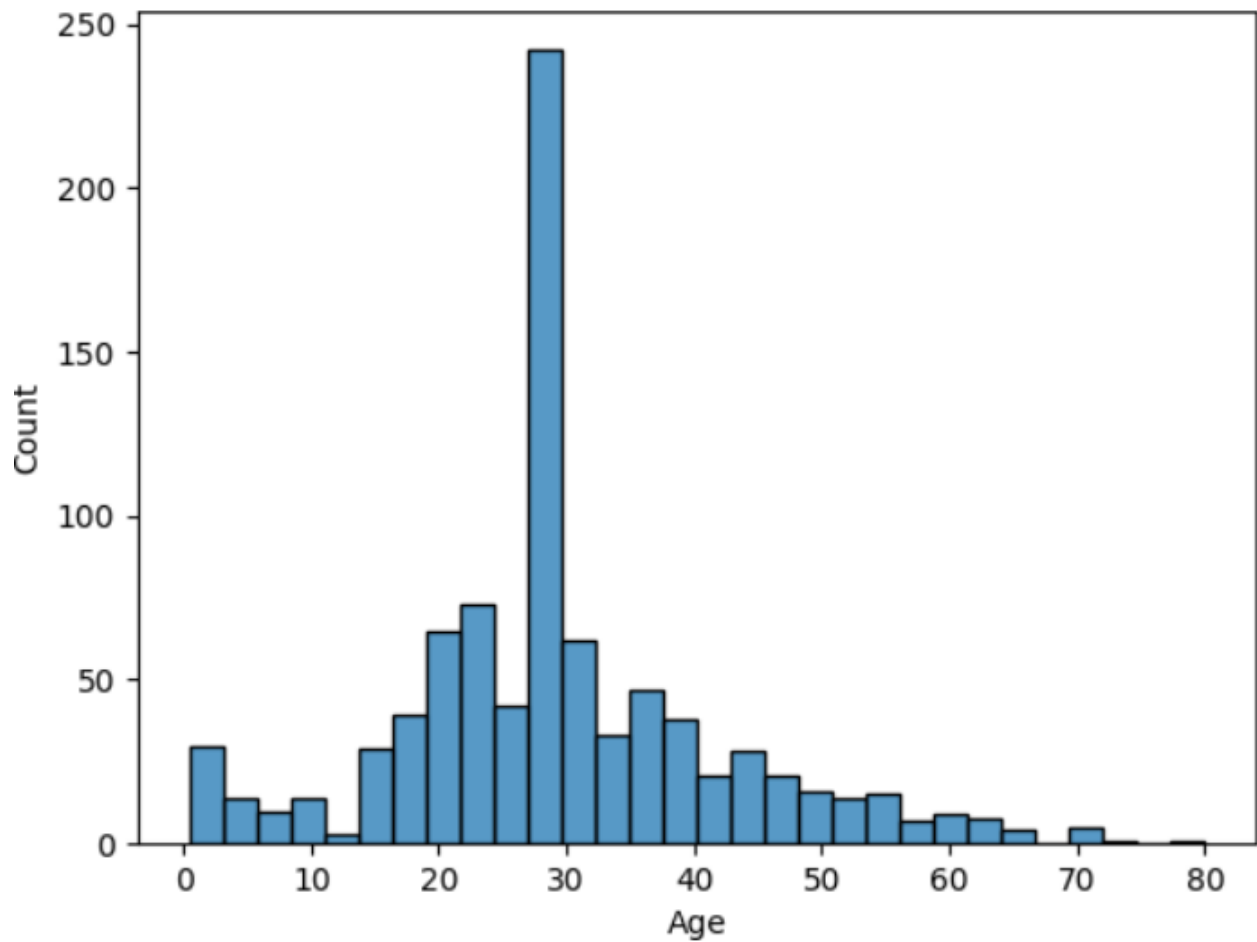
3.Correlation Analysis

The correlation heatmap below shows the linear relationship between numeric features. Features such as Fare and Passenger Class have notable correlations with survival.



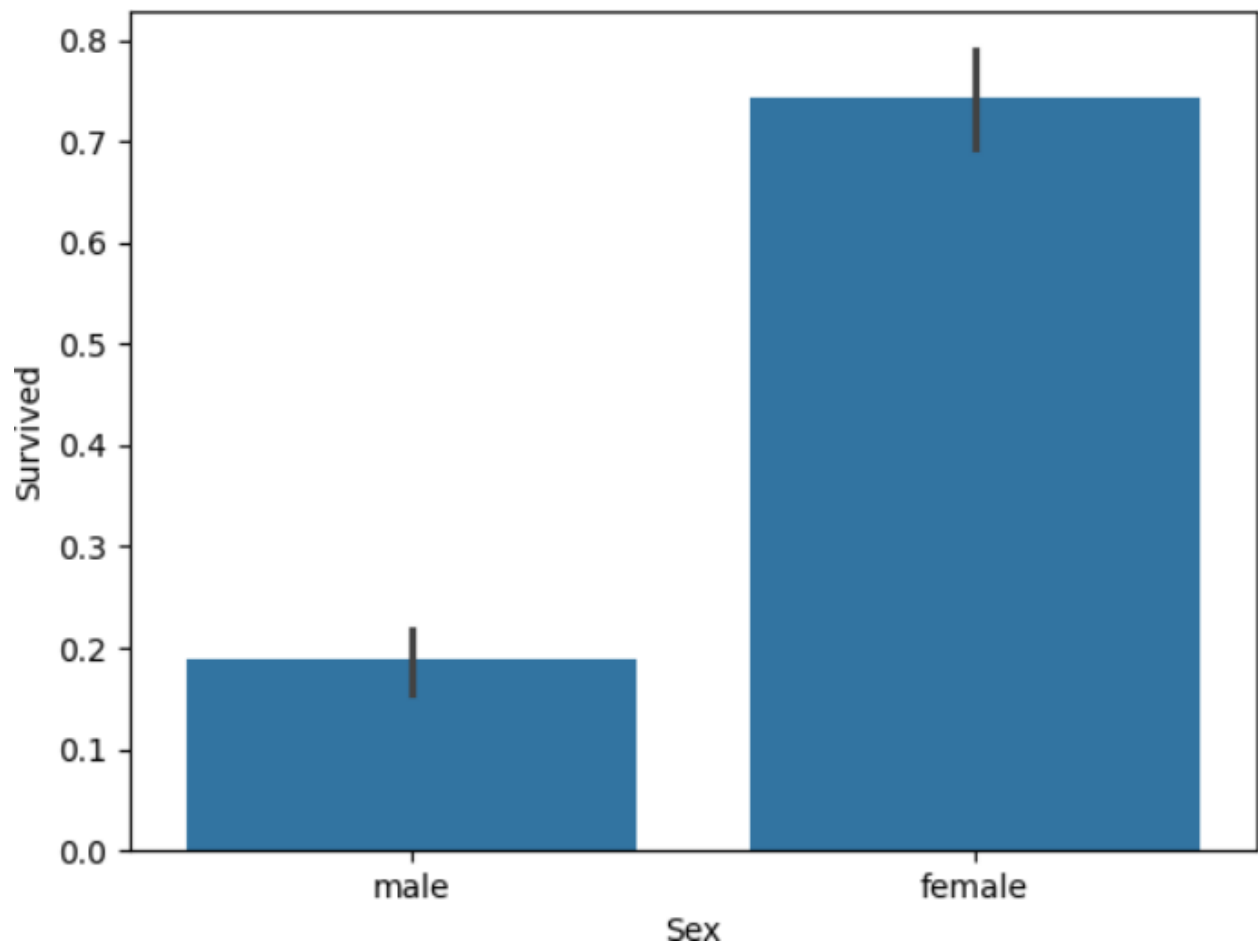
4.Distribution Analysis

The following distribution plots display the spread of continuous variables and reveal difference between survivors and non-survivors



5.Survival Analysis

Survival rates vary significantly by passenger class and gender. Females and first-class passengers had higher chances of survival.



6. Conclusion

Key findings from the analysis include:

- Female passengers had a higher survival rate.
- Higher passenger class correlated with better survival chances.
- Age distribution indicates children had better survival rates compared to adults.

These findings could be useful for predictive modeling and further research.