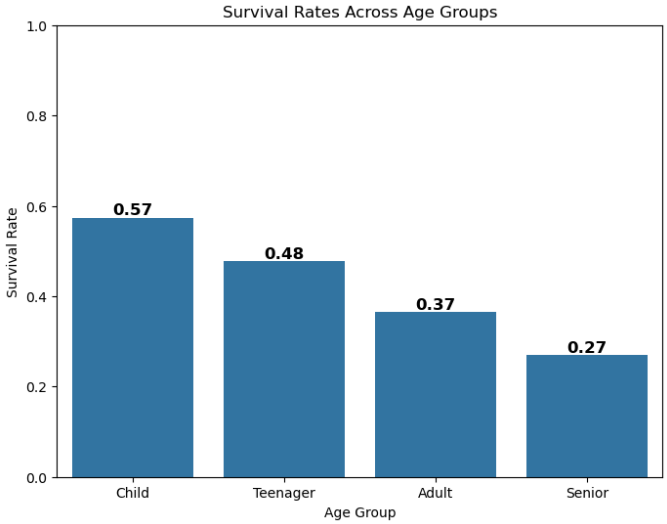
BE 7910

Assignment 3

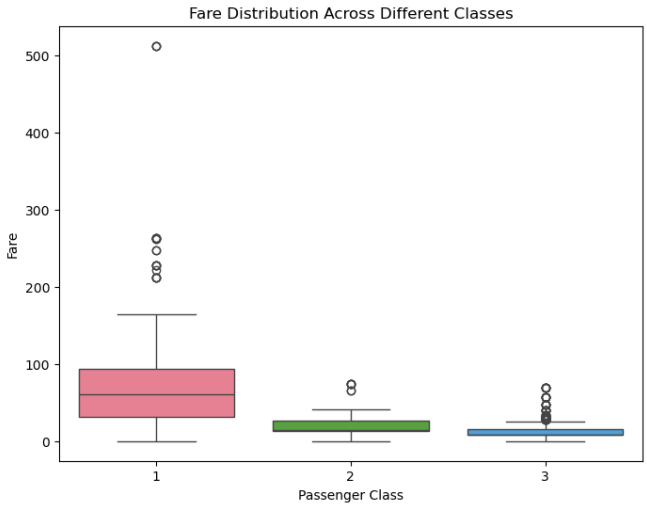
1. **How does age group affect survival rates?**

Age significantly impacted survival rates, with younger individuals (children and teenagers) having higher survival rates compared to adults and seniors.



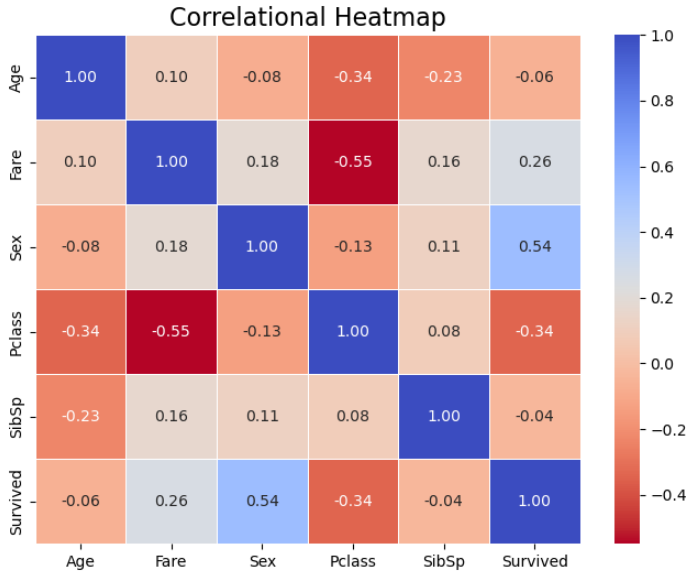
2. **What trends do you observe in fare distribution across classes?**

The fare distribution shows that higher classes paid significantly more, with First Class having the highest median fare and the largest variability, including extreme outliers. Third Class had the lowest fares with less variation, while Second Class fares were moderate and more consistent.



3. **What insights does the heatmap provide about correlations? Which factors are correlated with survival?**

The heatmap shows that Sex (0.54), Fare (0.26), and Pclass (-0.34) are the most correlated factors with survival. Higher survival rates are associated with being female, paying a higher fare, and being in a higher class, while lower-class passengers had a negative correlation with survival.



4. **How does the relationship between age and fare vary across passenger classes?**

First Class passengers generally paid higher fares, with some extreme outliers exceeding 500, whereas Second- and Third-Class passengers had lower fares with less variation. Across all classes, age does not show a strong correlation with fares, meaning ticket prices are likely more dependent on class rather than passenger age.