SUMMARY OF FINDINGS

The exploratory data analysis of the Titanic dataset highlights clear demographic, socio-economic, and survival trends. Most passengers were between 20 and 40 years old, with a slight right-skew in the age distribution. Males formed the majority of the passenger list, and third-class tickets were most common, indicating a strong socio-economic presence in the lower class. Fare amounts varied greatly, with first-class passengers paying significantly more and showing a wider price range. Southampton served as the main port of embarkation for the majority of travelers. Correlation analysis revealed a moderate negative link between fare and passenger class, while other numeric features displayed minimal multicollinearity. Survival patterns strongly favored females, children, and higher-class passengers, reflecting the historical "women and children first" policy during the evacuation. These insights not only outline the key characteristics of the Titanic's passenger profile but also provide valuable direction for predictive modeling and deeper statistical exploration.

"Survival on the Titanic was heavily influenced by class, gender, and age, with women, children, and higher-class passengers enjoying the greatest chances of rescue."