Titanic Survival Analysis – EDA Summary

Objective

The objective of this project was to explore the Titanic dataset to identify patterns and factors influencing passenger survival, with a strong emphasis on bias-aware interpretation and clear visual reasoning.

Key Analyses Performed

- Overall survival vs death distribution
- Survival comparison across passenger classes (count and percentage)
- Survival comparison across gender (count and percentage)
- Normalization to remove population bias

Major Insights

- A majority of passengers did not survive the disaster.
- Passenger class had a strong influence on survival probability.
- First-class passengers had significantly higher survival rates.
- Female passengers survived at much higher rates than males.
- Percentage-based analysis revealed patterns hidden by raw counts.

Bias Awareness

Raw counts were found to be misleading due to unequal group sizes. Normalization using percentages was essential to correctly interpret survival probabilities across different passenger groups.

Conclusion

This exploratory analysis demonstrates that survival on the Titanic was strongly influenced by social and structural factors such as passenger class and gender. The project highlights the importance of careful interpretation and bias correction in exploratory data analysis.