Name Aoun Muhammad

Roll No 045

Titanic

This project involves implementing a machine learning model to predict whether passengers were transported based on available dataset features. The dataset is preprocessed by handling missing values using forward fill (ffill) and encoding categorical variables using Label Encoding. Key unnecessary columns like "Name" and "Cabin" are dropped to avoid irrelevant data affecting predictions.

The target variable, "Transported", is converted into a binary integer format (0 or 1) for classification. The dataset is then split into features (X) and labels (y) before training a Random Forest Classifier with 100 estimators and a fixed random state for reproducibility.

The model then makes predictions, which are mapped back to the respective Passenger IDs for submission.

Model, The Random Forest Algorithm, known for its robustness against overfitting and high interpretability, is well-suited for this task.

