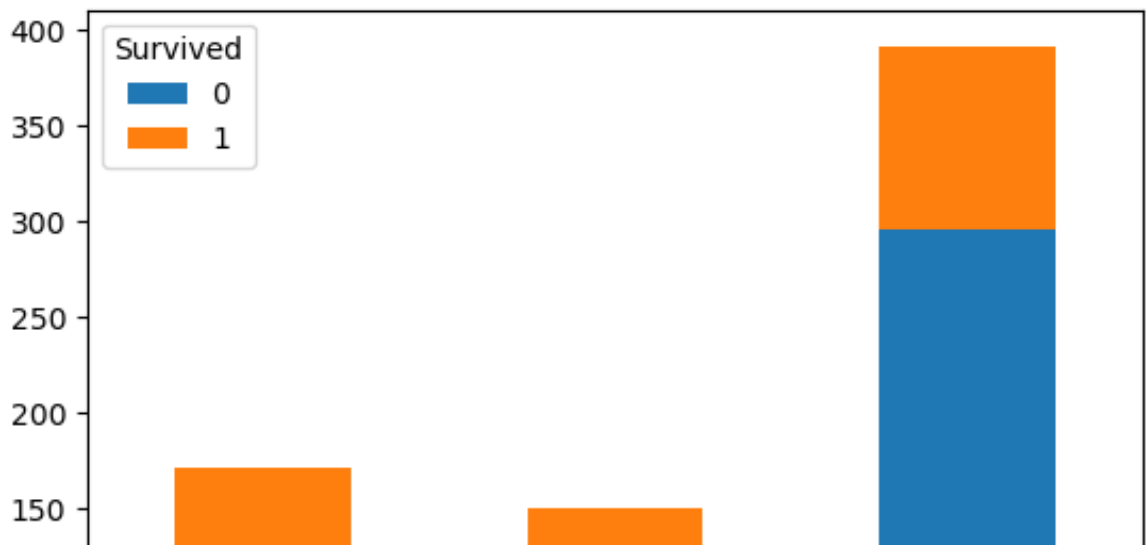
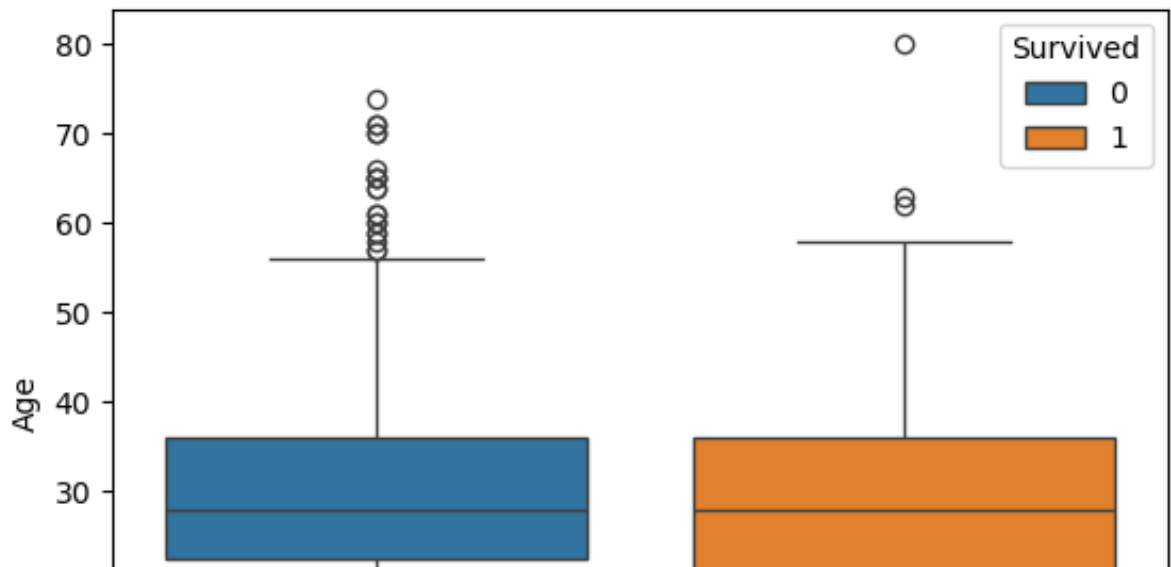
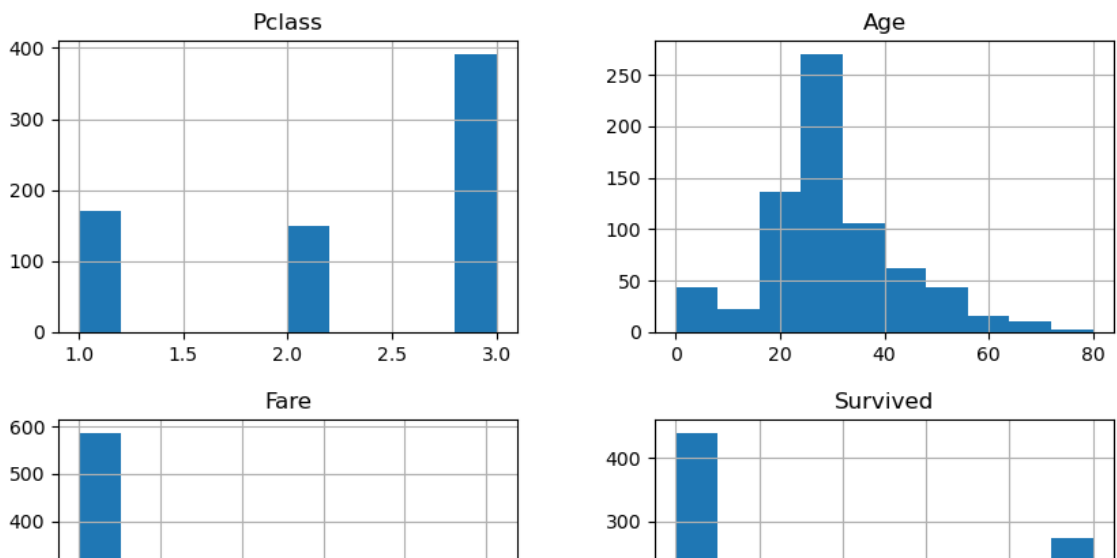
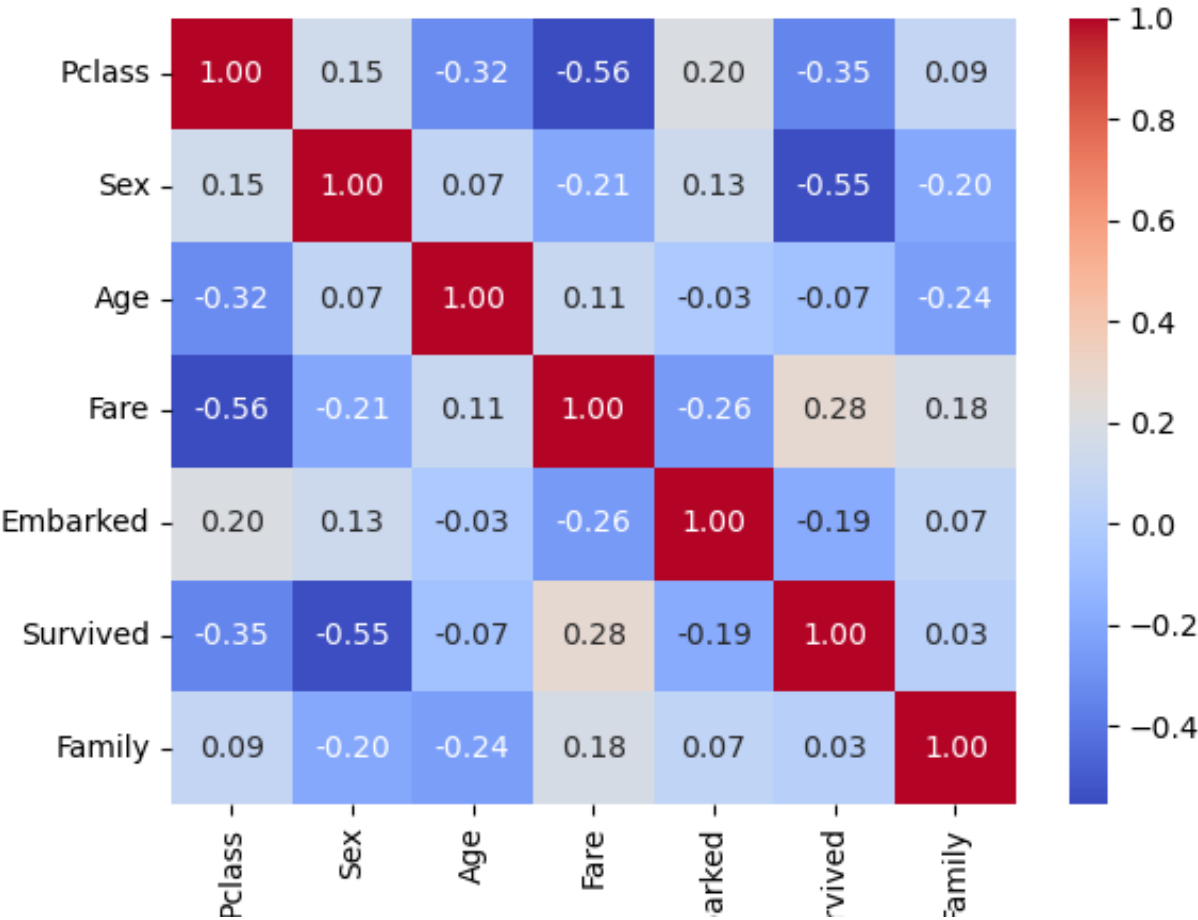


# Titanic Data Analysis Report

## Data Exploration and Visualization



Gender vs Survived



Age: 0 missing values

Fare: 0 missing values

Embarked: 2 missing values

Survived: 0 missing values

Family: 0 missing values

Feature Engineering

Correlation Heatmap

Model Selection and Training

Model Evaluation Results

Validation Score: 0.7972027972027972

Cross-Validation Mean Score: 0.799720540288775

Accuracy: 0.7972027972027972

Recall: 0.6779661016949152

Precision: 0.8

F1 Score: 0.7339449541284404

Confusion Matrix

True Positives (TP): 40

True Negatives (TN): 74

False Positives (FP): 10

False Negatives (FN): 19

Classification Report

	precision	recall	f1-score	support
0	0.80	0.88	0.84	84
1	0.80	0.68	0.73	59
accuracy			0.80	143
macro avg	0.80	0.78	0.79	143
weighted avg	0.80	0.80	0.79	143

Model Evaluation

Evaluation Metrics

Accuracy: 0.80

Precision: 0.80

Recall: 0.68

F1 Score: 0.73

Classification Report

	precision	recall	f1-score	support
0	0.80	0.88	0.84	84
1	0.80	0.68	0.73	59
accuracy			0.80	143
macro avg	0.80	0.78	0.79	143
weighted avg	0.80	0.80	0.79	143