

Logistics Regression

Test Set Performance:

AUC: 0.8500

Precision: 0.6452

Recall: 0.8004

F1-Score: 0.7144

Classification Report:

	precision	recall	f1-score	support
0	0.89	0.78	0.83	5002
1	0.65	0.80	0.71	2485
accuracy			0.79	7487
macro avg	0.77	0.79	0.77	7487
weighted avg	0.81	0.79	0.79	7487

Decision Tree

Test Set Performance:

AUC: 0.9037

Precision: 0.8257

Recall: 0.7264

F1-Score: 0.7729

Classification Report:

	precision	recall	f1-score	support
0	0.87	0.92	0.90	5002
1	0.83	0.73	0.77	2485
accuracy			0.86	7487
macro avg	0.85	0.83	0.83	7487
weighted avg	0.86	0.86	0.86	7487

SVM

Test Set Performance:

AUC: 0.9106

Precision: 0.7457

Recall: 0.8213

F1-Score: 0.7817

Classification Report:

	precision	recall	f1-score	support
0	0.91	0.86	0.88	5002
1	0.75	0.82	0.78	2485
accuracy			0.85	7487
macro avg	0.83	0.84	0.83	7487
weighted avg	0.85	0.85	0.85	7487

Random Forest

Test Set Performance:

AUC: 0.9325

Precision: 0.8509

Recall: 0.7602

F1-Score: 0.8030

Classification Report:

	precision	recall	f1-score	support
0	0.89	0.93	0.91	5002
1	0.85	0.76	0.80	2485
accuracy			0.88	7487
macro avg	0.87	0.85	0.86	7487
weighted avg	0.87	0.88	0.87	7487

AdaBoost

Test Set Performance:

AUC: 0.9042

Precision: 0.7124

Recall: 0.8173

F1-Score: 0.7612

Classification Report:

	precision	recall	f1-score	support
0	0.90	0.84	0.87	5002
1	0.71	0.82	0.76	2485
accuracy			0.83	7487
macro avg	0.81	0.83	0.81	7487
weighted avg	0.84	0.83	0.83	7487

XGBoost

Test Set Performance:

AUC: 0.9341

Precision: 0.7867

Recall: 0.8254

F1-Score: 0.8056

Classification Report:

	precision	recall	f1-score	support
0	0.91	0.89	0.90	5002
1	0.79	0.83	0.81	2485
accuracy			0.87	7487
macro avg	0.85	0.86	0.85	7487
weighted avg	0.87	0.87	0.87	7487

Neural Networks

Test Set Performance:

AUC: 0.9247

Precision: 0.7303

Recall: 0.8523

F1-Score: 0.7866

Classification Report:

	precision	recall	f1-score	support
0	0.92	0.84	0.88	5002
1	0.73	0.85	0.79	2485
accuracy			0.85	7487
macro avg	0.83	0.85	0.83	7487
weighted avg	0.86	0.85	0.85	7487