

--- Evaluation Report for Logistic Regression ---

Training Time: 13.33 seconds

Accuracy: 0.9269

F1-Score: 0.9211

Classification Report:

	precision	recall	f1-score	support
0	1.00	0.88	0.93	4099
1	0.86	1.00	0.92	3074
accuracy			0.93	7173
macro avg	0.93	0.94	0.93	7173
weighted avg	0.94	0.93	0.93	7173

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--- Evaluation Report for Decision Tree ---

Training Time: 0.26 seconds

Accuracy: 0.9495

F1-Score: 0.9411

Classification Report:

	precision	recall	f1-score	support
0	0.96	0.96	0.96	4099
1	0.94	0.94	0.94	3074
accuracy			0.95	7173
macro avg	0.95	0.95	0.95	7173
weighted avg	0.95	0.95	0.95	7173

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--- Evaluation Report for Random Forest ---

Training Time: 3.14 seconds

Accuracy: 0.9508

F1-Score: 0.9428

Classification Report:

	precision	recall	f1-score	support
0	0.96	0.95	0.96	4099
1	0.94	0.95	0.94	3074
accuracy			0.95	7173
macro avg	0.95	0.95	0.95	7173
weighted avg	0.95	0.95	0.95	7173

--- Evaluation Report for Gradient Boosting ---

Training Time: 9.39 seconds

Accuracy: 0.9382

F1-Score: 0.9320

Classification Report:

	precision	recall	f1-score	support
0	0.99	0.90	0.94	4099
1	0.88	0.99	0.93	3074
accuracy			0.94	7173
macro avg	0.94	0.94	0.94	7173
weighted avg	0.94	0.94	0.94	7173

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--- Evaluation Report for Support Vector Machine ---

Training Time: 217.23 seconds

Accuracy: 0.5717

F1-Score: 0.0071

Classification Report:

	precision	recall	f1-score	support
0	0.57	1.00	0.73	4099
1	0.55	0.00	0.01	3074
accuracy			0.57	7173
macro avg	0.56	0.50	0.37	7173
weighted avg	0.56	0.57	0.42	7173

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--- Evaluation Report for K-Nearest Neighbors ---

Training Time: 3.65 seconds

Accuracy: 0.7058

F1-Score: 0.6436

Classification Report:

	precision	recall	f1-score	support
0	0.73	0.77	0.75	4099
1	0.67	0.62	0.64	3074
accuracy			0.71	7173
macro avg	0.70	0.70	0.70	7173
weighted avg	0.70	0.71	0.70	7173

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--- Evaluation Report for XGBoost ---

Training Time: 3.55 seconds

Accuracy: 0.9501

F1-Score: 0.9446

Classification Report:

	precision	recall	f1-score	support
0	0.99	0.92	0.95	4099
1	0.90	0.99	0.94	3074
accuracy			0.95	7173
macro avg	0.95	0.96	0.95	7173
weighted avg	0.95	0.95	0.95	7173

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--- Final Model Comparison Summary ---

	Model	Accuracy	F1-Score	Time (s)
0	XGBoost	0.950091	0.944565	3.553575
1	Random Forest	0.950788	0.942797	3.135879
2	Decision Tree	0.949533	0.941138	0.264026
3	Gradient Boosting	0.938241	0.932003	9.386914
4	Logistic Regression	0.926948	0.921108	13.334961
5	K-Nearest Neighbors	0.705841	0.643581	3.653442
6	Support Vector Machine	0.571727	0.007111	217.234435