

Model Approach	Recall (Holdout)	Precision	PR-AUC	Key Strength	
Naive Baseline	0.00%	0.00%	N/A	High Accuracy, Zero Utility	
Logistic Regression	38.10%	8.00%	0.52	Fast, Linear Baseline	
LightGBM (Tuned)	61.90%	19.40%	0.77	Best single-model recall	
Soft Ensemble	62.40%	20.10%	0.78	Most stable generalization	
Neural Network	58.20%	15.50%	0.69	Scalability for larger data	