Model Metrics — Test Set

Summary metrics for baseline and tuned models used in the Credit Risk project. Primary selection metric: PR-AUC (Average Precision) due to class imbalance. Confusion-matrix counts are included for reproducibility.

| Model | Threshold | ROC-AUC | PR-AUC | Accuracy | Pos Precision | Pos Recall | Pos F1 | Neg Precision | Neg Recall | Neg F1 | TN | FP | FN | TP |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LogisticRegression (baseline) | 0.5 | 0.822 | 0.612 | 0.728 | 0.431 | 0.766 | 0.552 | 0.916 | 0.717 | 0.805 | 3633 | 1431 | 332 | 1086 |
| RandomForest (baseline, class\_weight='balanced') | 0.5 | 0.935 | 0.886 | 0.933 | 0.969 | 0.717 | 0.824 | 0.926 | 0.993 | 0.959 | 5028 | 36 | 398 | 1020 |
| GradientBoosting (baseline, class\_weight='balanced') | 0.5 | 0.927 | 0.87 | 0.887 | 0.717 | 0.795 | 0.754 | 0.941 | 0.912 | 0.926 | 4620 | 444 | 291 | 1127 |
| GradientBoosting (tuned winner) | 0.709 | 0.945 | 0.902 | 0.936 | 0.986 | 0.715 | 0.829 | 0.926 | 0.997 | 0.96 | 5050 | 14 | 404 | 1014 |

# Charts:







