Class Imbalance

Sampling Strategies

- Random oversampling
- Random undersampling
- SMOTE (Synthetic Minority)
- ADASYN (Adaptive Synthetic)

Cost-sensitive Learning

- Weighted loss functions
- Class weights in sklearn
- Focal loss for deep learning
- Penalize misclassifications differently

✓ Proper Evaluation Metrics

Precision	Recall	F1-score	PR-AUC
Balanced Accuracy	Matthews CC	Cohen's Kappa	G-mean