CHECKLIST

Machine Learning for Fraud Detection

Building effective ML fraud detection systems

1. Audit your data pipeline for quality, mislabeled samples, and noise immediately.
2. Implement real-time transaction scoring with latency under 500 milliseconds.
3. Hire domain experts to engineer behavioral anomaly features capturing fraud patterns.
4. Set up automated model retraining pipelines triggered weekly or monthly.
5. Deploy explainability tools like SHAP or LIME for regulatory compliance.
6. Monitor model precision and recall metrics continuously for performance drift.
7. A/B test new fraud detection rules against live traffic systematically.
8. Replace static rule-based systems with machine learning models within six months.
9. Create synthetic fraud data using GANs to improve rare-fraud detection rates.
10. Label fraud and non-fraud cases with precision before training any model.
11. Track checkout abandonment rates when review delays exceed two seconds.
12. Establish human-in-the-loop review processes for edge cases and high-risk transactions.