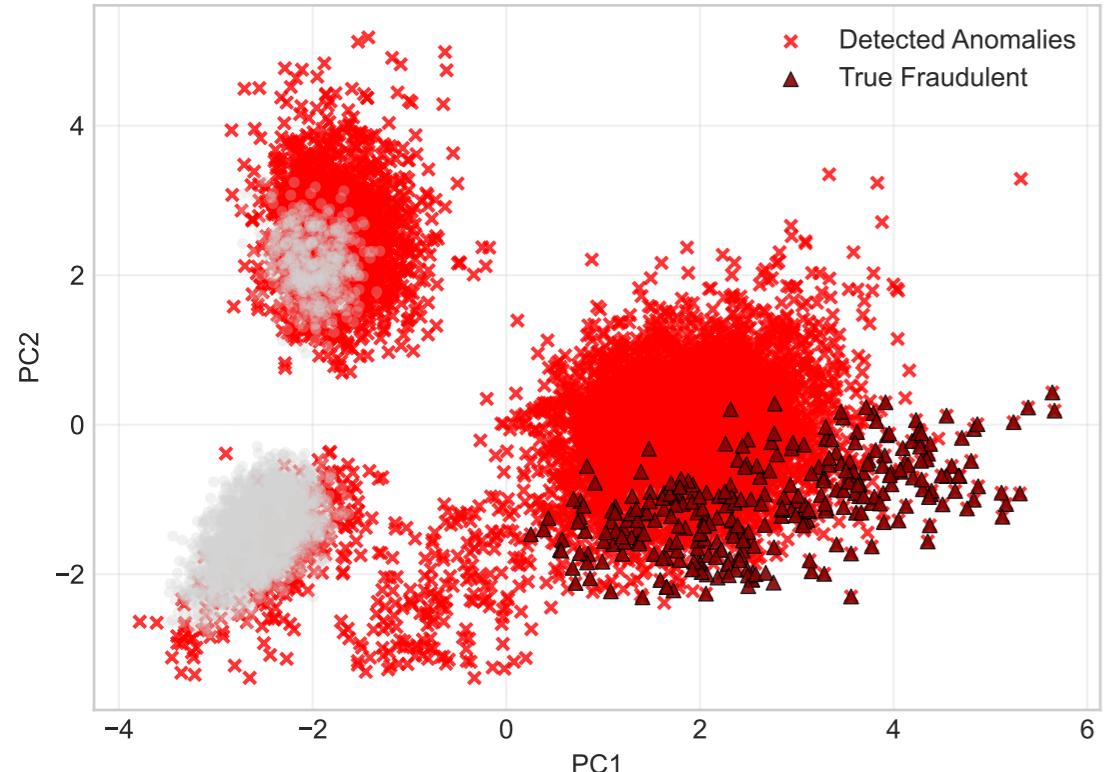
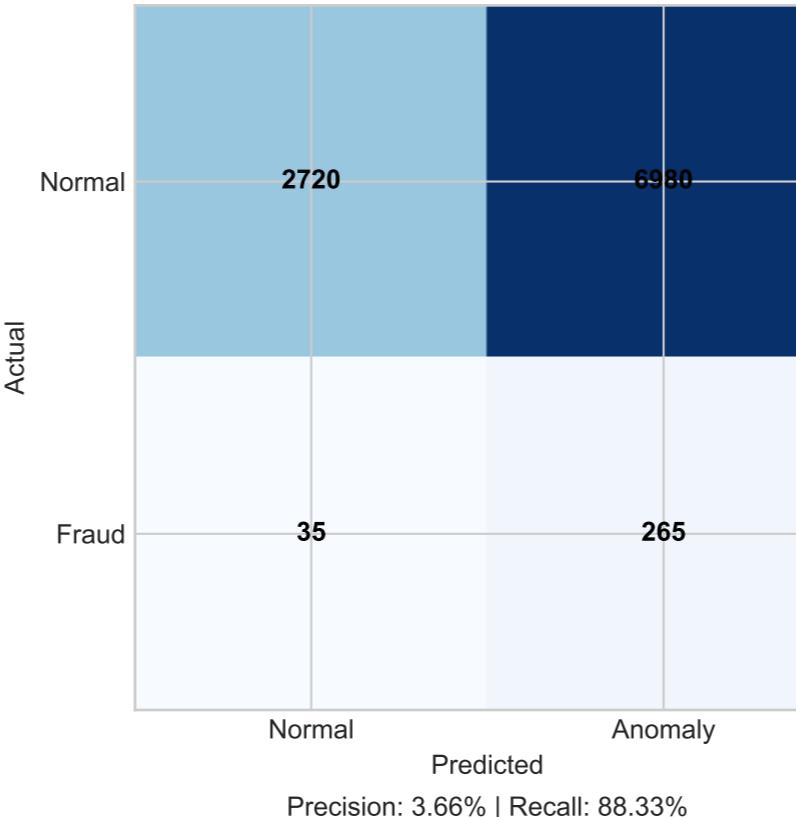


# Fraud Detection with DBSCAN: Identifying Anomalous Patterns

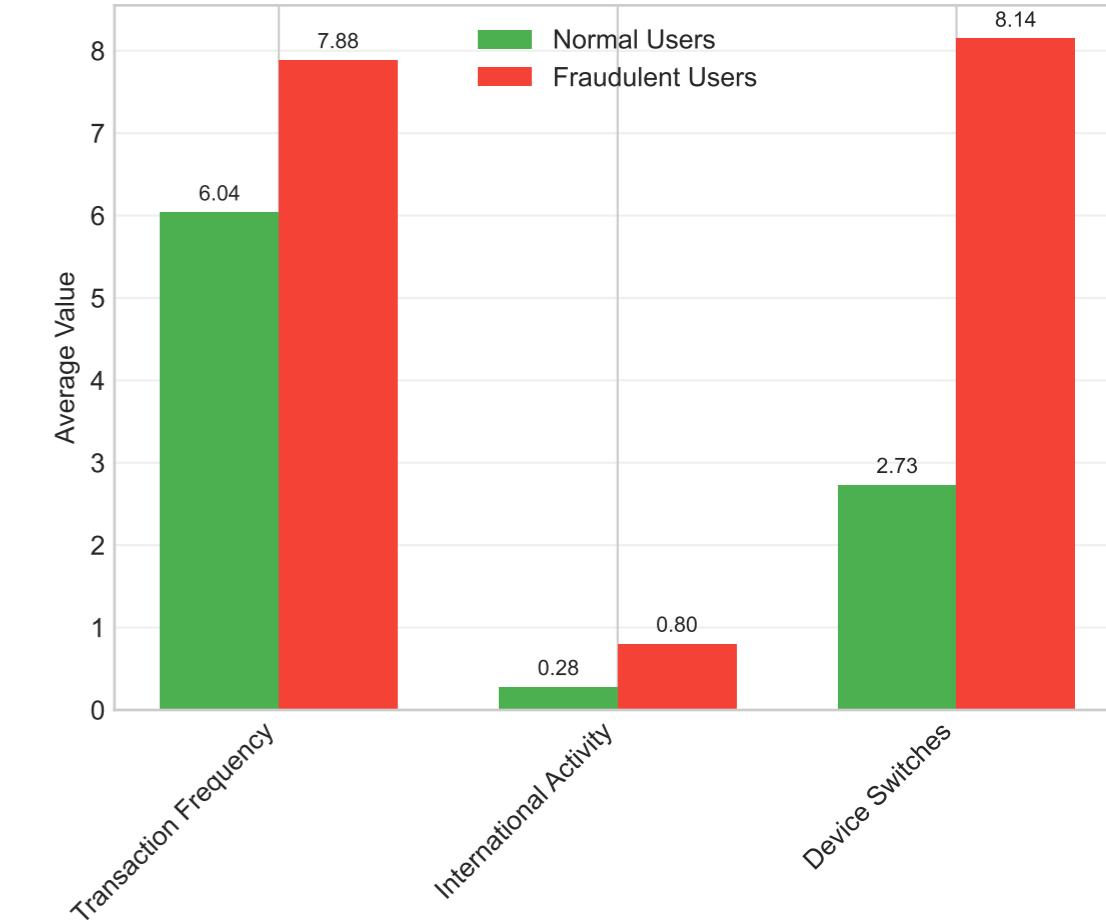
DBSCAN Anomaly Detection vs True Fraud



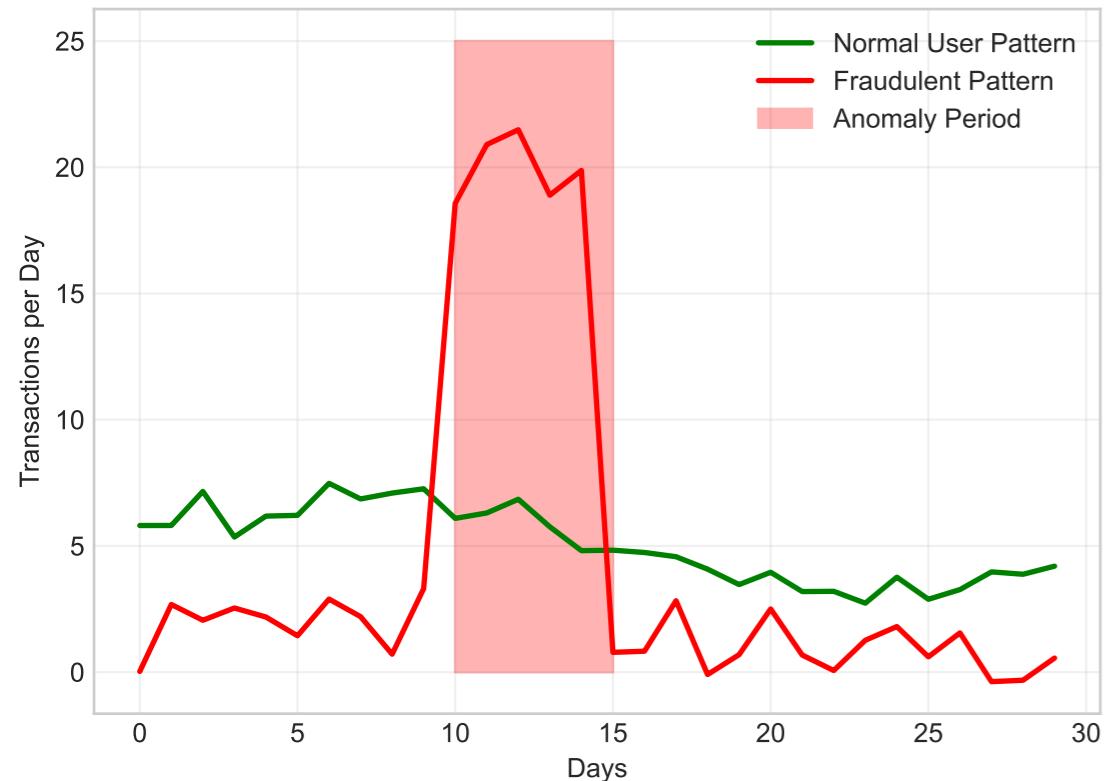
Fraud Detection Performance



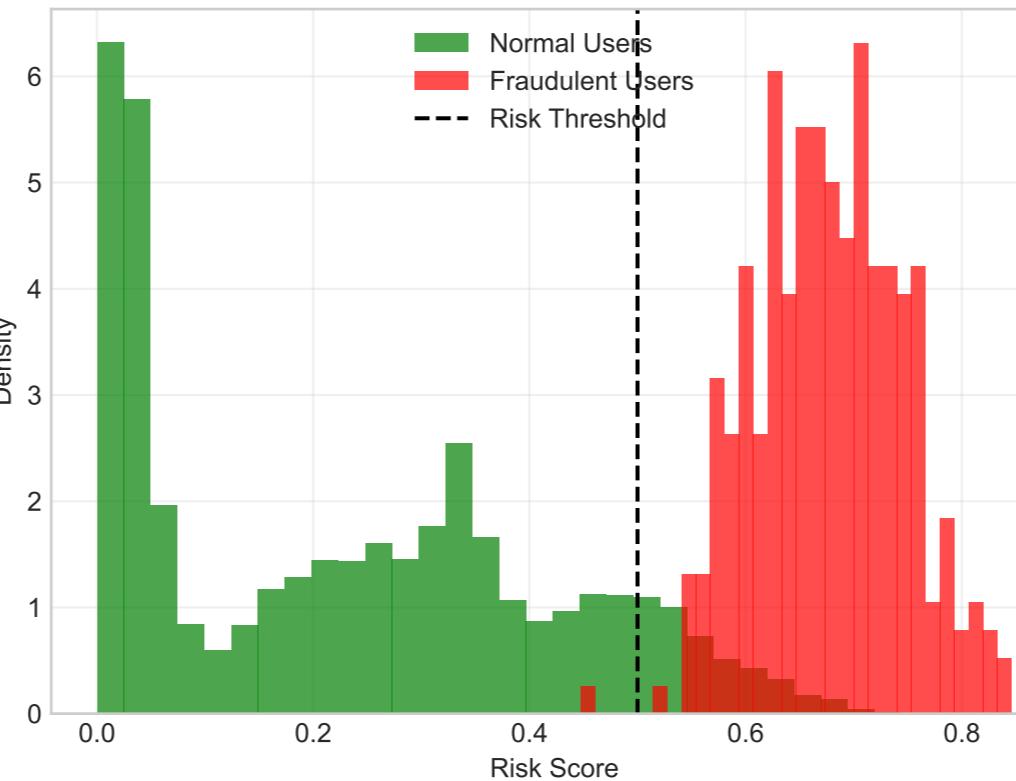
Fraud Indicators: Key Feature Differences



Temporal Patterns: Normal vs Fraudulent



Risk Score Distribution



## FRAUD DETECTION SUMMARY

Total Users: 10,000  
True Fraudulent: 300 (3.0%)

DBSCAN Performance:  

- Anomalies Detected: 7245
- Correctly Identified: 265/300
- Precision: 3.7%
- Recall: 88.3%

Key Fraud Indicators:  

- High international activity (80% vs 28%)
- Unusual transaction spikes
- Multiple device switches
- Zero support contacts