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Fraud Detection on Bank Payments Using Machine Learning

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Abstract: *Financial fraud poses a major threat to organizations, with traditional detection methods often proving costly, slow, and inaccurate. The rise in digital transactions highlights the need for intelligent, automated solutions. This study presents a fraud detection model using the Random Forest Classifier to identify fraudulent bank transactions. Experiments conducted on the Banksim dataset show that the model achieves 99% accuracy in both training and testing phases, outperforming conventional approaches. These results underscore the potential of machine learning to enhance the efficiency and effectiveness of fraud detection in the banking sector.*

Keywords: Financial fraud Detection, Machine Learning, Random Forest Classifier, Banksim Dataset, Automated Fraud Detection, Banking Security, Fraudulent transactions, Artificial Intelligence, Classification Algorithms, Data Mining

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