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Analysis and Identification of Suspicious UPI Payments using ML Techniques for a Sustainable Economy

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Abstract: This paper examines the common types of the suspicious transaction in UPI payment system and provides common predictive models for suspicion-free UPI transactions for long term sustainability of digital transactions. This study suggests an AI-ML framework using a 6,000 real UPI transaction dataset to analyze and determine the suspicious transaction. First, Principal Component Analysis (PCA) is carried out. This simplifies high dimensional data without mitigating vital information needed for data processing. AI models like SVM (Support Vector Machine), Decision Tree and Naive Bayes are applied to evaluate model. Analysis of Variance (ANOVA) is used to examine the variations. The assimilation of PCA, SVM, DT, Naive Bayes, and ANOVA creates a consistence model framework for our study. By employing this model suspicious digital transactions can be detected thereby wining the trust of the users.

Keywords: Artificial Intelligence, SVM, ANOVA, Naive Bayes, PCA, UPI, Digital transaction

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