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UPI Shield

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Abstract: *The goal of this project is to create an Android application that uses sophisticated fraud detection and monitoring to improve the security and legitimacy of UPI (Unified Payments Interface) transactions. The app provides a comprehensive platform for vendors, administrators, and users to track and verify UPI transactions, identifying and preventing fraudulent activities like phishing, account takeovers, and unauthorized transactions. It addresses critical issues in the digital payments industry, such as transaction transparency, data security, and fraud prevention, by leveraging machine learning and big data analytics to ensure a secure payment environment.*

The application integrates several modules designed to monitor and validate UPI transactions at different stages:

1. Admin Module: Manages and oversees transaction data, fraud detection models, and real-time monitoring to ensure secure UPI operations.

2. Vendor Module: Allows vendors to check transaction statuses, verify Unique Transaction Reference (UTR) numbers, review QR code scanning logs, and receive fraud alerts.

3. User Module: Enables users to perform secure transactions, check their transaction history, view payment status, and receive notifications regarding suspicious activities.

This project is motivated by the growing number of fraudulent UPI transactions, which pose risks to user funds and reduce trust in digital payments. By combining machine learning algorithms with multi-layered fraud detection points, the app offers a quick, cost-effective, and robust solution for fraud prevention in UPI transactions.

The app empowers users and vendors with real-time transaction verification, helping to prevent fraudulent transactions, safeguard user funds, and enhance the integrity of the UPI ecosystem. This Android-based system improves transparency in digital payments and provides a streamlined approach to secure, AI-driven fraud detection and prevention for UPI transactions..

Keywords: UPI, transactions, fraud.

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