Fraud Detection in Banking

Exploring Advanced Solutions to Detect and Prevent Fraudulent Activities in the Banking Sector

Problem Statement

- Fraudulent transactions in banking are increasing, affecting customers and institutions globally.

- Managing and detecting various types of fraud, such as identity theft, credit card fraud, and account takeovers, is a significant challenge for banks. Current systems often produce high false-positive rates, impacting both operations and customer experience.

- Imagine if a bank could detect fraud instantly, protecting customers from unauthorized transactions without interrupting legitimate banking activities.

Statistics

"Banking fraud is estimated to cost the global economy billions annually."

"The digital fraud detection market is projected to grow substantially in the coming years."

Source link: https://pages.acfe.com/Earn-Your-CFE-Credential.html?utm_source=google&utm_medium=paid-search&utm_campaign=-GCERT&gad_source=1&gclid=Cj0KCQiArby5BhCDARIsAIJvjISxtupjNs6M6UkEKaR85RfWewP38YDOURtMQhNp3aha4IVoe4qCGUcaApbxEALw_wcB
Source link: https://www.marketsandmarkets.com/

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Stakeholders

- Financial Institutions

- Customers

- Regulatory Bodies

- FinTech companies involved in fraud prevention

Present Scenario

- Traditional fraud detection relies on rule-based systems and manual reviews, which often struggle with dynamic fraud tactics.

- High rates of false positives lead to customer dissatisfaction and additional operational costs.

- Note the need for real-time monitoring that can adapt to new fraud techniques.

Proposed Solution - Predictive/ Preventive Maintainance

- The proposed fraud detection solution uses predictive analytics to monitor and flag unusual banking transactions in real-time.

- Machine learning models analyze patterns in user behavior, triggering alerts for anomalies that may indicate fraud.

- A centralized dashboard consolidates these alerts, enabling quick investigation and response.

- Personalized monitoring adjusts to individual customer habits, improving detection accuracy and minimizing false alarms. This proactive approach enhances security and operational efficiency, helping banks to prevent fraud before it impacts customers.

Features

- "Real-time transaction monitoring to identify fraud instantly."

- "Multi-dimensional analysis of data points like transaction patterns, location, and device."

- "Continuous learning to improve detection over time with new data."

- "Customer-based alerts that trigger on behavioral anomalies."

TRACKING THE TREND
Bank frauds

Public sector banks

Legend: Amt (₹cr) (LHS) — No. (RHS)

FY	Amt (₹cr)	No.
FY21	77,879	2,888
FY22	40,015	
FY23	21,125	3,405

Private banks

Legend: Amt (₹cr) (LHS) — No. (RHS)

FY	Amt (₹cr)	No.
FY21	45,515	3,705
FY22	17,387	
FY23	8,727	8,932

Total

Legend: Amt (₹cr) (LHS) — No. (RHS)

FY	Amt (₹cr)	No.
FY21	132,389	7,338
FY22	59,819	
FY23	30,252	13,530

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Thank You!

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