

Empowering Digital Transactions with AI: A Look at Fraud Detection and AML

- A Case Study

Client

- A fintech company based in Stockholm, Sweden.
- Specializes in digital payment solutions for small and medium-sized businesses.
- Operations are spread across Northern European countries such as Sweden, Finland, Denmark and Norway.

Problem

- Challenges in detecting fraudulent transactions.
- Error-prone and time-consuming process of manually reviewing the transactions.
- Lack of a system to detect and prevent money laundering activities.
- High rate of false positives and false negatives.

Solution

- Collected and prepared a large dataset of valid and fraudulent historical transactions. This was used to train the AI system. The data was prepared for training by utilizing pre-processing techniques such as data cleaning, data normalization and feature engineering.
- Machine learning algorithms were utilized to analyze the transaction data and behavioral data, and identify patterns linked to fraudulent activity.
- The AI-based solution was then integrated into the current system of the client and transactions were screened in real-time.

- The system was monitored continuously and used techniques like A/B testing to adjust to new patterns of fraudulent activity.
- AML (Anti-Money Laundering) checks and monitoring systems (such as solutions for customer identification and verification, transaction monitoring, reporting suspicious activity to stakeholders, etc.) were implemented to detect and prevent money laundering activities. The system alerts the AML team of suspicious transactions that need to be investigated. Collaboration with the team is required to establish alert thresholds and assess system performance.
- A chatbot was built using natural language processing (NLP) and machine learning technologies to aid with compliance (KYCs) and fraud detection, and to assist customers. The chatbot was integrated with the AML system and was trained to detect phishing scams and other suspicious activities. Other than that it was trained to assist customers with common queries such as account balance inquiries, transaction history, etc.

Business Impact

- The rate of fraudulent transactions on our client's platform reduced significantly by 47%.
- The system's accuracy rate to detect and prevent fraudulent activity increased to 98%.
- Implementation of AML checks resulted in a 24% decrease in money laundering activities.
- The introduction of AI in digital payments improved the user experience as the transactions were faster and more secure.
- The chatbot reduced 19% of customer service requests and inquiries.
- Manual effort and time required for reviewing the transactions were reduced to 12%.