**AI-Based Robust Fraud Detection System Supporting Million Transactions per Second and Saving $850,000 Annually**

**Key Highlights**

$850,000: Savings annually in reconciliation and infrastructure costs

35%: Increase in identifying risk violators through data cross-verification

75%: Improvement in tracking lost revenue to enhance inspection and correction rates

5X: Operational efficiency achieved through predictive modeling and automation

**About the Client**

The client is a US-based FinTech product company specializing in supporting major banking and insurance corporations. Their core focus is to deliver secure, scalable, and robust solutions for high-stakes financial environments, ensuring data integrity and operational excellence.

**Challenges**

The client required the integration of a real-time fraud detection system into their core banking solution without modifying existing applications. Specific challenges included:

1. Designing a fault-tolerant system capable of supporting millions of transactions per second with millisecond response times.

2. Flexible fraud detection rules that could be added or modified on-the-fly.

3. Implementing transaction tracking and auditing for pattern analysis.

4. Seamlessly integrating the fraud detection system into their workflow without significant changes to the core banking system.

These requirements necessitated a scalable, high-performance system capable of seamless integration without compromising system ability.

**What We Did**

DXFactor employed a multi-disciplinary approach to develop an intelligent fraud detection system:

1. Data Aggregation: Consolidated and processed data across multiple sources for comprehensive analysis.

2. Predictive Modeling: Developed models to identify potential frauds and anomalies with high accuracy.

3. Classification and Machine Learning: Utilized advanced algorithms to enhance detection accuracy.

4. Data Cleansing: Ensured clean and actionable data for effective fraud analysis.

5. RFM Analysis: Enhanced insights into transactional patterns and customer behavior.

**Solution**

DXFactor developed and deployed an advanced predictive modeling technique to detect fraud in real-time, ensuring operational efficiency and financial savings. Key features included:

1. Real-Time Fraud Detection: Enabled immediate blocking of suspicious transactions using advanced fraud filters. This resulted in significant savings from prevented fraud cases and enhanced customer satisfaction.

2. Seamless Core Banking Integration: Built an adapter to connect the fraud detection system with core banking endpoints and gateway switches. It helped to achieve seamless integration without requiring extensive changes to the client's core banking system.

3. Prediction Model: Utilized RFM analysis, user feedback, and historical transactions to improve detection capabilities and ensure high accuracy & adaptability to evolving fraud patterns.

4. Scalable Infrastructure: Delivered a fault-tolerant system capable of handling millions of transactions per second.

**Benefits**

Enhanced Risk Management: Improved the ability to identify and block high-risk violators.

Operational Efficiency: Increased efficiency fivefold through automated processes.

Scalability: Supported millions of transactions per second without compromising performance.

Customer Trust: Improved engagement and satisfaction by safeguarding user transactions.

**Results and Outcomes**

DXFactor's AI-based fraud detection system empowered the client's transaction monitoring capabilities, achieving:

$850,000 Annual Savings: In reconciliation and infrastructure costs.

35% Improvement: In identifying high-risk violators through data cross-verification.

75% Improvement: In tracking lost revenue through enhanced inspection and correction rates.

5X Operational Efficiency: Empowered the client to handle high transaction volumes seamlessly.