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FraudShield

Real time financial fraud deep investigation

Overview

FraudShield is a real-time, Agentic AI-driven fraud investigation platform that transforms how financial institutions, payment providers and high-volume transaction businesses detect, analyze and respond to fraudulent activities.

Unlike traditional fraud detection tools that stop at flagging suspicious transactions, FraudShield dives deeper with a multi-agent AI framework that automates investigation, enhances accuracy and delivers intelligent, compliant fraud reports.

The system orchestrates specialized agents, each focusing on distinct tasks across the investigation lifecycle—ensuring real-time insights, reduced false positives and improved operational efficiency.

Fraud investigation : What enterprises grapple with

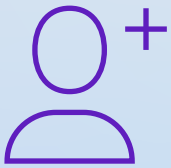
Typical challenges faced in the sector

High false positives and detection gaps

Current systems often flag legitimate transactions as fraudulent, failing to detect sophisticated fraud patterns, leading to operational inefficiencies and customer frustration.

Integration and scalability issues

Difficulty in integrating with legacy systems and scaling to handle high transaction volumes impacts real-time fraud detection effectiveness.



Detection latency

Delays in identifying and responding to fraudulent activities hinder the ability to act swiftly, affecting both fraud prevention and customer experience.

Poor customer experience

Slow notifications, lack of empathy, and inefficient resolution of fraud cases damage customer trust and satisfaction.

Compliance and reporting barriers

Generating accurate, timely, and actionable fraud reports for regulators is often difficult, posing risks to compliance and consumer protection.

Operational inefficiencies and high costs

Manual fraud investigation, reporting, and system downtime result in high operational costs and resource consumption, reducing overall system effectiveness.

Key components of the FraudShield architecture:

Fraud Intelligence Agent:
Continuously monitors transaction streams, applies behavioral analysis and integrates threat intelligence to identify anomalies

Deep Investigation Agent:
Validates suspicious transactions against historical data, user profiles and geolocation using OpenStreetMap-based coordinates or AWS-native services

Customer Reporting Agent:
Leverages sentiment analysis to notify customers in real-time with empathetic, tailored responses

Insights and Reporting Agent:
Automatically generates fraud reports compliant with standards like GDPR and PCI DSS

Fraud Prevention Agent (Optional):
Proactively identifies vulnerabilities and simulates fraud scenarios to strengthen defense

This multi-layered approach ensures that only high-risk cases are escalated, false positives are minimized and all stakeholders—customers, compliance officers and fraud analysts—are equipped with actionable insights.

Target Customers:

Financial Institutions: Banks, insurance companies and digital lenders

Payment Providers: Gateways, processors and mobile wallet operators

ecommerce and Digital Retailers: High-volume B2C platforms

Healthcare and Telecom: Environments with complex, transactional fraud patterns

Highlights

FraudShield uses a multi-agent architecture with dedicated AI agents for transaction monitoring, behavioral analysis, deep investigation and compliance reporting—reducing false positives and ensuring faster, more intelligent fraud decisions

Built on scalable AWS infrastructure, FraudShield supports real-time fraud detection across high-volume platforms and generates actionable, audit-ready fraud reports that meet global compliance standards like GDPR and PCI DSS

FraudShield streamlines the end-to-end fraud investigation process through automation, reducing manual effort, accelerating resolution timelines and enabling cost-effective fraud operations—all while enhancing customer experience with real-time, empathetic communication

AWS Services used:

Amazon ECS | Amazon Bedrock | Amazon DynamoDB | Amazon SES

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