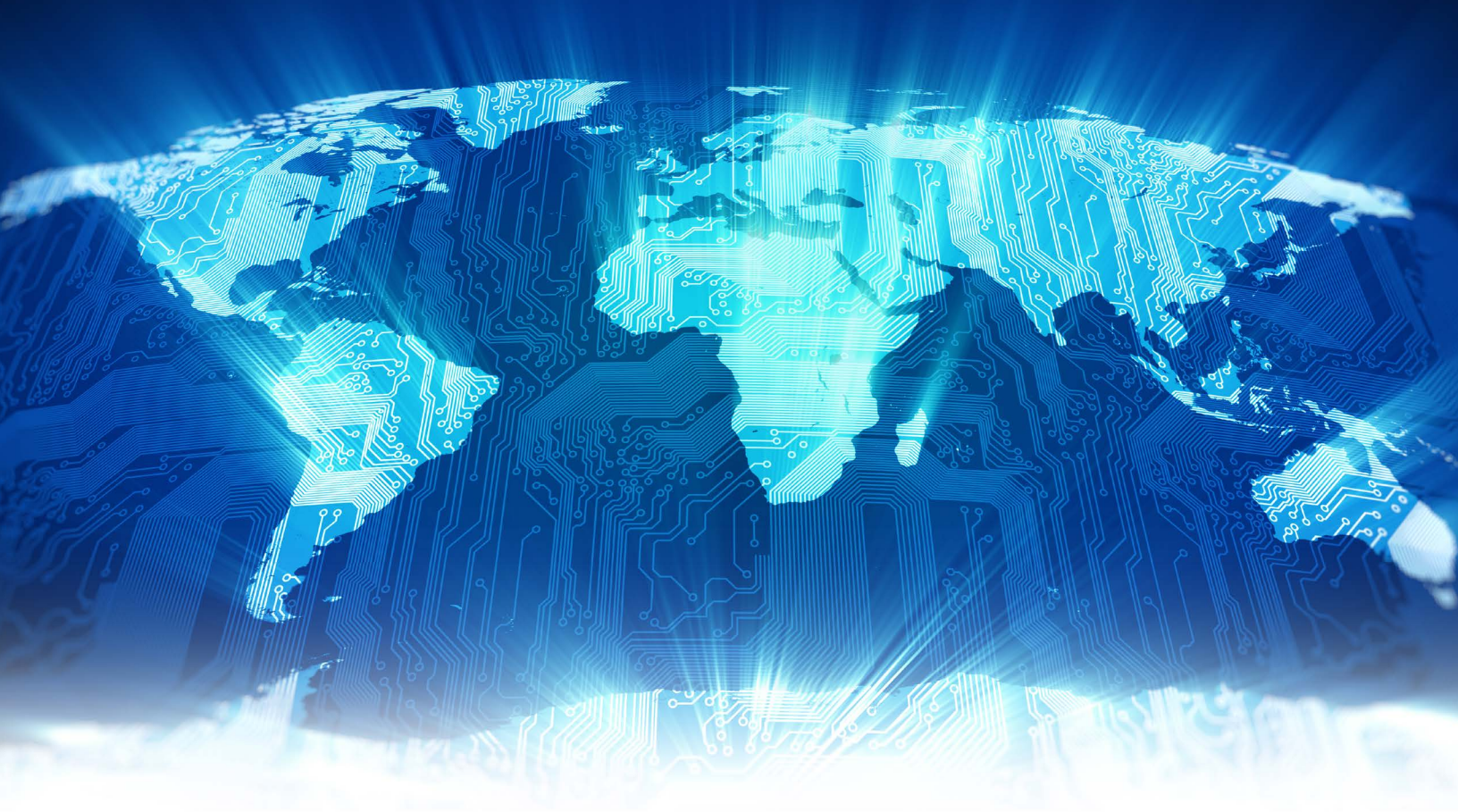


Solution Overview

AI Fraud Insights and Intelligence Combating Fraud in a Digital World

Technology moves breathtakingly fast. So do fraudsters. Cognizant can help, by offering deep expertise in combating fraud. Our human-centric, AI-based machine learning solutions allow companies to analyze massive datasets—from records of transactions to online behaviors—providing insights into potential fraud and defeating perpetrators at their own game.



The Sheer Scale of Global Fraud is Staggering

Businesses around the world face enormous losses to fraud. The U.N. Office on Drugs and Crime estimates that as much as 5% of global GDP is laundered every year. That's \$2 trillion USD.¹

The cost of efforts to detect fraud and combat money-laundering are growing fast as well. Researchers expect an annual outlay of more than \$41 billion USD by 2022 on fraud prevention efforts—and that doesn't include the costs of internal resources or compliance.²

The news gets worse, for these aren't the only costs. Regulators now levy significant penalties on institutions that fail to stop financial crimes and money-laundering. Fines on banks have risen 500-fold within a decade—now amounting to \$10 billion USD. As the digital world becomes more complex, exposure to fraud is growing and the risks are becoming more severe.



Better tools to fight fraud

Market leaders across industry—from financial services to healthcare services—are increasingly recognizing the limitations of existing strategies and tools to combat fraud.

With the massive growth in the amount of data generated by transactions of all types, existing fraud detection programs are unable to mine data to detect patterns that might signal potential fraud. And current systems generate a far too high a number of false positives or negatives that require manual investigation—at enormous operational costs.

Today's companies need faster, more effective, and more analytically accurate ways to address fraud risk. We can help, by leveraging artificial intelligence to proactively detect and prevent emerging fraud.

Stay Ahead of Fraudsters with Artificial Intelligence

Cognizant's fraud intelligence solutions discover hidden trends in massive datasets, using rules that dynamically adjust in real time to emerging threats. This not only gives organizations insight into their most recent history of fraudulent behavior, but also gives them foresight. Our AI-based solutions can recognize patterns of behavior that signal potential fraud, allowing users to take countermeasures before experiencing losses.

Banking Story

A global financial institution enlisted Cognizant to optimize its anti-money-laundering (AML) alerts. We used an AI-based solution assisted by human sciences and machine learning to improve how our client addressed money-laundering, reducing false alerts and automating investigations. Layered on top of our client's existing fraud detection application, our solution has improved alert quality through intelligent profiling, prioritization, and causality inferences, and adapts to emerging scenarios dynamically.

Developed by our experts in human behavior and cognitive science, our fraud intelligence solutions add a new layer of customer protection and fraud detection, providing organizations with the most advanced tools to address fraud risk and implement new and stronger prevention. Our solutions use this adaptive set of tools to preempt fraud and reduce threats and, at the same time, help our clients reduce the costs of monitoring their online data.

Predictive and Proactive

Implementing adaptive fraud detection techniques based on advances in deep learning and behavioral pattern recognition now allows smarter, more sophisticated fraud detection. Machine intelligence uses advanced algorithms to monitor and react to the ever-increasing risk of fraud, even anticipating perpetrators' next moves.

Ai for Risk Management

Our AI approach was developed in our artificial intelligence testing laboratories and has been proven through significant testing and application experience. By developing use cases for different scenarios by industry and exposure, our solution catalogs different types of fraud risk and then conceives, creates and delivers customized, value-added detection and prevention capabilities.

Our fraud intelligence solutions leverage the following capabilities:

- I Developing insights from behavior.** We use algorithms to identify trends in data, layer patterns against known fraudulent behavior or past losses or exposure, and leverage the findings to identify and prevent activities that are demonstrably fraud. Insights based on

human cognition allow us to continue to support machine learning for predictive fraud mitigation.

- I A platform-based AI solution.** We incorporate built-in applications to identify specific types of fraud and inform fast detection. This promotes faster implementation and deployment of the solution across an organizations' functions and geographic footprint, improving reach, effectiveness and time-to-value.
- I A human-centric, design-thinking approach.** All our solutions are developed with a focus on improving user experience. From project inception to implementation, we look to ensure that your customers enjoy a seamless, frictionless experience across online channels, even as you safeguard and streamline their transactions.

Specialized for Industry

Fraud is pervasive across industries and failure to detect it results in huge financial losses. Our artificial-intelligence-based risk assessment technology offers solutions for a range of applications to combat both economic losses or even damages to human lives and health. Examples include:



- I Credit card fraud detection.** Typical fraud systems simply flag and examine non-normal card-holder behavior. Our systems derive insights from deep analysis of fraudulent activity—analyzing thousands of transactions per second and improving the quality of the data driving decisions, to reduce false positives and prevent fraud in real-time.
- I Check fraud detection.** We trained a neural network to compare and distinguish good checks from anomalous ones, automatically comparing factors on scans of deposited checks to those in the database to identify and alert on potential counterfeits in real time.
- I Alert optimization.** Our AML and fraud detection solutions help reduce expensive false positives by making more meaningful classifications of customers based on wide-ranging datasets, closing alerts automatically when risk is low and focusing on investigations with more potential impact.
- I Transaction due diligence.** We're helping professional services firms improve the functionality of their risk management due diligence software. This is enabling much faster and more accurate research on businesses and any ties to potentially illegal behavior, including money-laundering, insider trading, corruption and terrorism.
- I Medical claims fraud intelligence.** Our solutions can reduce potential losses for healthcare companies, correlating claims and providers to validate issues and avoid

Healthcare Story

Cognizant helped a healthcare insurer/provider to reduce opioid abuse using AI. Our human-centric data analytics solution combines advanced algorithmic processing and machine learning about drug-seeking behaviors to identify patients who may be seeking to deceive caregivers into prescribing opioids. Our solution identified 85,000 at-risk patients, helping doctors prevent potential abuse in real time during medical appointments and is expected to save this healthcare provider \$60 million USD.

false positives by identifying fraudulent claims and payment anomalies in real time.

- I Reducing inventory losses.** Our solution allows retailers to better manage, track and measure inventory, in turn identifying factors that cause losses due to theft and fraud, to prevent shrinkage at a store level and learn ways to reduce it.
- I Detecting fraudulent insurance claims.** By highlighting certain patterns in data, our solution gives insurers the ability to detect fraud across their claims function, dissecting data to identify the volume and scope of fraudulent claims across lines of business.

Omnichannel Risk Solutions

Our robust platform-based solution ensures that all customer engagement channels—from mobile and web applications to telephone calls and agency touchpoints—are equipped to counter fraudulent behavior while ensuring a seamless, smooth customer experience.

Our next-generation fraud management solutions are enriched with AI, new rules and statistical models, thick behavioral data drawn from studies of human behavior and third-party data. Lessons from interactions and forensic investigations feed into our system of intelligence, which learns and becomes increasingly effective over time.

Key components include:

- **Adaptive machine learning.** We implement machine learning with human-like cognitive

knowledge. Our solution goes beyond simple rules that merely flag anomalies to actively searching for emerging patterns of behavior to address and mitigate risks and fraud.

- **Linkage analysis.** We identify entities associated with known fraud types and practices used by fraud-linked entities, such as by monitoring social activity.
- **Model development.** Our fraud-scoring tools and detailed statistical analytics provide quantitative insight into possible fraud activity.
- **Out-of-pattern analysis.** We compare customers' activities with peer-group behavior and their own past behavior, to identify outlying transactions that could signal potential fraud.

Solutions for Business

At Cognizant, our fraud solutions are based in both technology and human sciences. We preempt risks in real time by synthesizing and enriching data using dynamic rules, statistical models, thick data and AI/ML technologies. We identify new patterns to prevent and manage fraud, reducing losses and

write-offs, decreasing operational costs, enhancing operational efficiencies and improving customer experiences by detecting and alerting our clients at the moment when fraud is being committed.

Learn More

Cognizant's AI Fraud Insights and Intelligence solutions will enable your organization to grow customer trust and loyalty with highly sophisticated, AI-driven, human-centric solutions for protecting their data and transactions. By mitigating fraud and risk across all channels, your organization can improve its agility, increase value and reduce costs.

For more information, please visit cognizant.com/ai.

Endnotes

- 1 United Nations Office on Drugs and Crime <https://www.unodc.org/unodc/en/money-laundering/globalization.html>.
- 2 Research and Markets - Fraud Detection and Prevention Market by Solution, Service, Application Area, Organization Size, Vertical, and Region - Global Forecast to 2022 https://www.researchandmarkets.com/research/gqfrnh/fraud_detection.

About Cognizant Artificial Intelligence Practice

As part of Cognizant Digital Business, Cognizant's Artificial Intelligence Practice provides advanced data collection and management expertise, as well as artificial intelligence and analytics capabilities that help clients create highly-personalized digital experiences, products and services at every touchpoint of the customer journey. Our AI solutions glean insights from data to inform decision-making, improve operations efficiencies and reduce costs. We apply Evolutionary AI, Conversational AI and decision support solutions built on machine learning, deep learning and advanced analytics techniques to help our clients optimize their business/IT strategy, identify new growth areas and outperform the competition. To learn more, visit us at cognizant.com/ai.

About Cognizant

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 193 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us @Cognizant.

Cognizant

World Headquarters

500 Frank W. Burr Blvd.
Teaneck, NJ 07666 USA
Phone: +1 201 801 0233
Fax: +1 201 801 0243
Toll Free: +1 888 937 3277

European Headquarters

1 Kingdom Street
Paddington Central
London W2 6BD England
Phone: +44 (0) 20 7297 7600
Fax: +44 (0) 20 7121 0102

India Operations Headquarters

#5/535 Old Mahabalipuram Road
Okkiyam Pettai, Thoraipakkam
Chennai, 600 096 India
Phone: +91 (0) 44 4209 6000
Fax: +91 (0) 44 4209 6060