How Machine Learning Can Help You Optimize Revenue

Accept more good orders with confidence using highly accurate, near real-time risk scoring

cybersource
A Visa Solution

For eCommerce businesses, staying ahead of payment fraud is a difficult and constantly evolving battle. Fraudsters grow smarter, bolder, and more sophisticated every year—developing new tactics and techniques that quickly make static anti-fraud measures less effective.

At the same time, fraud teams are constantly being asked to do more with less, especially in rapidly growing businesses, as anti-fraud resources almost never keep pace with increased transaction volumes. Fraud departments are under increasing pressure to not only eliminate fraudulent transactions and reduce chargeback rates, but also reduce false positives, accept more good payments, and provide customers with more frictionless and convenient payment experiences.

To help solve these challenges, many businesses are turning to machine learning (ML) solutions that simplify fraud detection by delivering automated risk scoring for each transaction. But how can you determine whether the solution you're using is up to the task? And what really drives risk score accuracy within a machine learning model?

Advanced machine learning platforms can help you:

Ensure your fraud risk management platform uses flexible, cutting-edge fraud detection models to help you optimize revenue

Accept more good orders with confidence, using highly accurate, near real-time risk scoring

Be confident that your fraud risk management solution is working effectively behind the scenes, driven by transaction data and global payments insights that aren't available with any other fraud detection platform

Why we invest in our machine learning models

Machine learning models automate risk detection and increase risk scoring accuracy while evaluating huge numbers of transactions in real time. They are trained using large volumes of past transaction data to establish cause and effect relationships about transactions; **the more high-quality data they have access to, the more accurate they can become.** The models are then able to make fast, accurate predictions about future transactions, summed up in easy-to-use risk scores that can be used to guide decision making within a rules-based risk management strategy.

ML solutions **remove human bias from the decision-making process,** and they are better positioned to maximize internal and external datasets to **help you manage fraud quickly, accurately and at a lower cost,** because they are able to detect subtle patterns that people often miss and incorporate those patterns into your risk scores on your behalf. They also lower your response time to new shopping and fraud trends—updating their fraud models automatically to reflect new behaviors (both good and bad) based on continuous analysis and processing of new data.

ML offers exceptional scalability that would be incredibly difficult and costly to match using manual rule-building and review processes. A sophisticated and accurate ML solution can automate, significantly reduce, and in some cases, even eliminate the need for manual review entirely— depending on a given merchant's broader business strategies and risk tolerance.

A powerful ML model can help you address complex payment processing challenges, including how to:

What can machine learning do for you?

- Facilitate and enable fast, accurate decision making

- Improve accuracy of transaction decisions

- Adapt and respond dynamically to evolving fraud tactics and changing circumstances

- Lower fraud management costs

- Help you analyze transactions in real-time

Get a real-world view on how businesses are using machine learning to manage fraud and optimize revenue, in our 2022 Global Fraud and Payments report

Stay current on emerging fraud patterns

Identify good customer behaviors

Detect new good customers

What sets Cybersource's machine learning platform apart

Rather than rely on just one statistical algorithm, **Cybersource combines several different methods** to leverage each model's unique strengths and offset their weaknesses—**identifying and applying the best model for each transaction—**to generate highly accurate risk scores in real time. Other key Cybersource innovations include **Identity Behavior Analysis,** our unique **Unified Consortium Model** and the **Rules Suggestion Engine.**

Together, these ML-based capabilities allow us to quickly and automatically detect fraud by analyzing a broader pool of transaction data than our competitors—while also delivering agile, accurate risk scoring targeted to our client's industries, regions and sale channels.

Cybersource's ML-powered solutions can help you:

- Optimize your payment processing strategies to reduce fraud and accept more good transactions from the start

- Lower fraud management costs through reduced false positives and manual reviews

- Enable you to stay focused on refining your core business strategies to further optimize revenue

For example, a transactional identity may be invisible in a given merchant's database because they are new to that merchant, but the breadth and depth of our data resources means this transactional identity is known to Cybersource. In this instance, Cybersource Decision Manager can take this known identity into account when calculating the risk score for the transaction. This ultimately allows the merchant to accept more good orders from new customers with greater confidence.

Cybersource's Unified Consortium Model
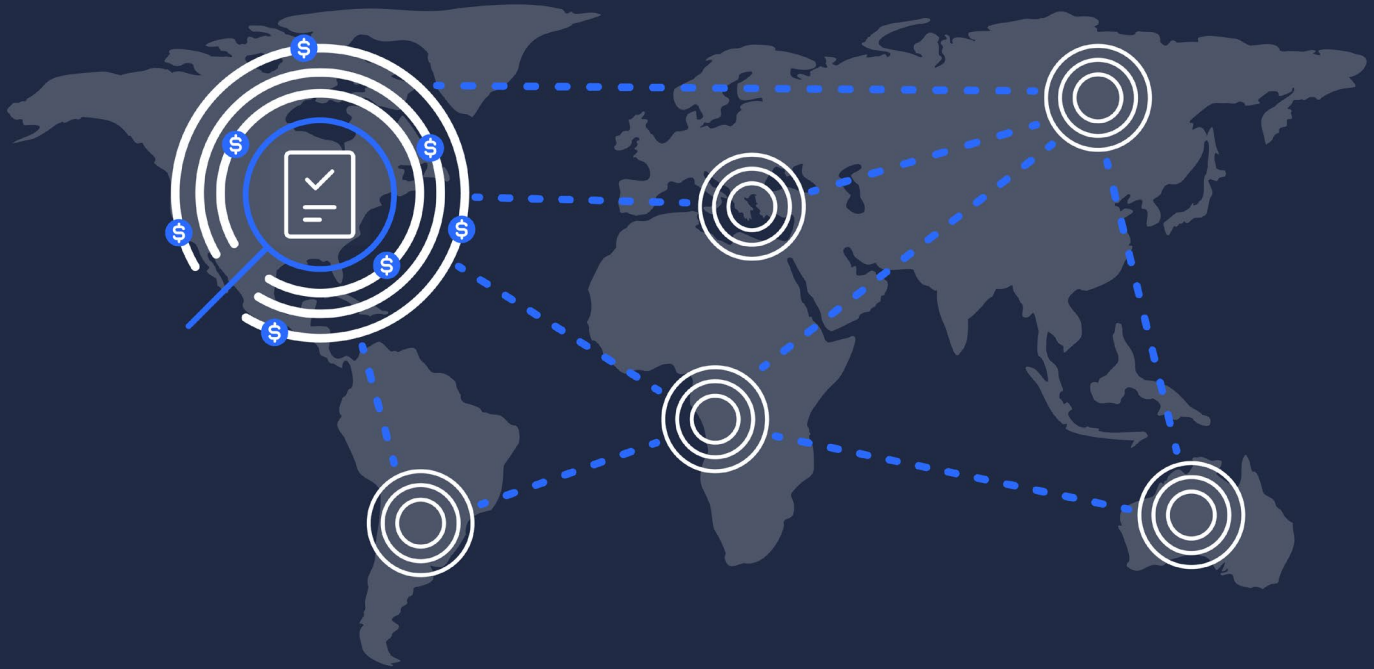
Our model consolidates data sets across multiple different regional models for better information sharing and greater risk-scoring accuracy.

Identity Behavior Analysis

Our ability to **leverage historical customer identity information across different merchants** as a foundational part of our machine learning program outpaces our competitors. This allows us to understand identities more effectively and track how they are used over time—empowering our clients to accept more good orders from new customers.

Unified Consortium Modeling

Our uniquely powerful Unified Consortium Model is one of the most potent aspects of our ML platform—and it delivers results from day one for new Decision Manager clients. This model takes a highly flexible approach to incorporating and leveraging local-level transaction data at a global scale. The model consolidates data sets across multiple different regional models for better information sharing and greater risk-scoring accuracy—while also anonymizing that data to maintain compliance with strict data privacy regulations and guidelines.

Rules Suggestion Engine

We also apply Decision Manager's advanced machine learning models to your historical transaction data to spot unique patterns and recommend new strategies.

Our Unified Consortium Model enables us to coordinate events and identities across all our merchants worldwide— giving us an incredibly powerful view into consumer spending trends and emerging fraud patterns.

Combining model-based and risk-based strategies for better results

ML is an essential fraud tool, but it can't do everything on its own. Unlike many other solutions, **Cybersource's Decision Manager combines our ML-generated risk scores with a robust and customizable rules engine.** The rules engine then makes decisions and takes actions in alignment with an organization's unique fraud strategies and broader business policies, automatically determining which transactions the business is willing (or unwilling) to accept.

Configurable rules provide businesses with the control they need to tailor their fraud strategies to meet particular objectives or adapt to unexpected changes in the market. Rules engines allow businesses to incorporate human ingenuity—analysts can adapt the rules in reaction to unexpected changes like COVID that haven't yet been incorporated by the ML models.

More of our unique ML offerings:

- Cybersource leverages ML across multiple applications to help you continuously optimize your fraud management strategies

- For instance, we use ML to close traditional gaps between model-based and risk-based approaches through our Decision Manager Replay and Rules Suggestion Engine capabilities

- These solutions use ML to automatically create new rules and evaluate potential strategies in real time using past transaction data

# What should you expect from a fraud detection and risk scoring engine?

Strength

Our solution is driven by Visa's AI-powered data processing capabilities, enabling it to incorporate high-volume streams of transaction data at near real-time speed. Advanced processing strength is critical for any ML fraud detection solution, as it allows the model to continuously learn, improve and optimize itself—which is essential to delivering seamless, broad-scale, automated fraud detection.

Size

Our platform is trained and continually enriched through access to VisaNet, one of the world's largest single sources of transaction data. All ML models need vast amounts of high-quality data to learn from, and your solution provider should be actively developing new algorithms to better interconnect and leverage all that data. This allows the model to be more accurate, predictive and stable.
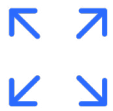
Scale

Our platform is global, but still flexible enough to adapt dynamically to the latest shopping and fraud trends, as well as changes in market conditions, at industry, local, regional and cross-border levels. Your solution should also be able to adjust its frame of reference up or down those levels as needed to accurately determine risk. More advanced models will be able to autonomously update different segments and share emerging fraud patterns across those segments.

A trailblazer in machine learning innovation for over 20 years

ML technology has been an essential part of Cybersource's core fraud and risk management solutions since they were launched more than twenty years ago. Cybersource was a pioneer in applying machine learning technology to fraud prevention, and we have been expanding and upgrading our leading machine learning technologies, capabilities and expertise ever since.

Cybersource's PhD-level data scientists have decades of expertise in both fraud management and machine learning-based data science—the key to building effective, accurate risk models. And as a **Visa solution we can leverage considerable advantages when it comes to strength, size and scale.**

Benefits of an accurate risk score

- Gain access to easy-to-use, data-driven fraud insights

- Adapt quickly to changing circumstances and market conditions

- Validate the real-world impact of new ML insights in specific situations

- Optimize fraud detection with fewer rules and more insights

Cybersource and Visa: a winning combination

Our machine learning model (powered on Visa's AI platform and optimized using aggregated global transaction data from VisaNet) delivers highly accurate risk scores in near-real time that help you optimize your fraud strategy to maximize acceptance. We collaborate with Visa's Advanced Analytics and Research teams for on-going innovations and patents.

Our powerful fraud risk scoring engine uses insights from VisaNet's unparalleled dataset— **aggregating and processing data from 141 billion transactions per year**[1]— giving us a global view of emerging fraud trends that most other fraud solutions are unable to offer[2] —allowing us to tailor custom approaches for our clients based on different regions, verticals and business models.

We can help you get more out of your business by giving you the insights and control you need to find the right balance between reducing fraud rates, improving approval rates and lowering operational costs.

With our industry-leading, innovative approach, you can rely on our highly accurate risk scores to help fight fraud, get the insights you need to manage your risk strategies and focus on your business, while improving the bottom line.

Maximize revenue

Minimize fraud loss

Effective fraud management is a balancing act

Minimize operational costs

[1] VisaNet transaction volume based on 2020 fiscal year. Volume may not include domestically routed transactions.
[2] The Nilson Report; ID 261327

Ask how we can help optimize your revenue.

Cybersource provides world-class fraud detection models with the innovation, flexibility and accuracy required to meet our clients where they're at today.

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