

DATAVISOR FEATURE PLATFORM

Accelerated. Advanced. Scalable.

A NEW APPROACH

Organizations today are looking to leverage advanced detection tools such as machine learning solutions to protect against increasingly sophisticated fraud attacks.

To get the model performance they need, data science and risk teams need big data, as well as the ability to uncover actionable insights from large volumes of data. They also need access to high-quality features informed by extensive domain expertise.

However, feature engineering is historically complex and time-consuming. Creating high-quality features can be extremely tedious because building each new feature is a multi-step process, and large organizations potentially need vast numbers of features to successfully address all relevant fraud scenarios.

Organizations need a faster and more efficient approach. Automated feature engineering enables data science and risk teams to effortlessly access and build powerful features. Back testing capabilities allows them to validate rules in just minutes. With DataVisor's Feature Platform, organizations can quickly deploy high-performance fraud features and models that deliver unrivaled results.

Flexible to Create Complex Custom Features

DataVisor's Feature Platform is designed for maximum flexibility to custom engineer unique features tailored to specific organizational needs. Teams can infuse the feature creation process with their own internal expertise, ensuring even greater degrees of customization and optimization. They can engineer any features using comprehensive functions and operators, and these features can be at event level, user level, or cluster level.

All features can be created with just a few clicks in the UI or via simple coding—no additional support from IT team is required.

Examples custom features:

- ▶ Attribute and transformation features; features from IP, address, user name, device ID, amount, and more.
- ▶ Velocity and aggregation features; for example, a feature to calculate the total number of logins from a single user in a 24 hour period.
- ▶ Advanced features; for example, a feature to calculate the total amount of transactions processed from a particular device within a set 7-day period, where the amount of transaction exceeds \$500.

Backtesting in Minutes

DataVisor's Feature Platform supports backtesting on historical data to validate detection performance, with full flexibility to choose the data's timestamp and sample set. The system will return results within minutes to speed up the testing process.

DataVisor's backtesting capability is particularly crucial if you have extensive historical data and want to validate them quickly to ensure optimal detection performance.

Out-of-Box Feature Packages

Feature Platform provides pre-built feature packages that are optimized for specific fraud types—based on DataVisor's advanced domain expertise.

For example, if your organization intends to detect transaction fraud, the "transaction fraud feature package" includes a list of recommended features that are proven to be effective in addressing transaction fraud, and will deliver strong detection results right away.

Example feature packages:

- ▶ Application fraud feature package
- ▶ Transaction fraud feature package
- ▶ Account takeover feature package
- ▶ User-generated content feature package

Example GIN features:

- ▶ Whether customer's email is randomly generated
- ▶ Risk score of the customer's IP subnet
- ▶ Whether the IP subnet has anomalously high volume

Automated Feature Engineering

DataVisor's Feature Platform automates the feature engineering process by producing thousands of auto-derived features based on user-imported raw data and mapped fields. These features are created using attributes—such as transaction data, device IDs, user agents, email addresses and more—to provide powerful features for advanced detection.

For example, from each transaction in raw data, DataVisor's Feature Platform derives advanced features such as:

- ▶ Age of the merchant
- ▶ Count unique buyers of the merchants in last 1, 3, 7, 30, 60, 90 days
- ▶ Compare volume distribution with other merchants in the same MCC category
- ▶ Check abnormally high volume vs age of the merchant

Global Intelligence Network Features

DataVisor's Feature Platform also fully integrates with our Global Intelligence Network (GIN). The DataVisor GIN, powered by over 4.2B protected accounts and 1 trillion+ events across industries, enhances machine learning engines with fine-grained fraud signals from rich digital data such as IP address subnets, prefixes, proxies and data centers, user agent strings, device types and OS, email address domains, and more.

The GIN integration further improves feature derivation and model performance.

High Scalability and Low Latency

Feature Platform processes large amount of data in real time—handling 10,000+ QPS with only 10-50 ms latency. It delivers a highly scalable solution and real-time computation by leveraging hyper-modern architecture.



Automated Engineering

Start using thousands of auto-derived enriched features in minutes.



Complete Flexibility

Engineer custom features to further enhance model performance and fraud detection.



End-to-End Workflow

Integrate seamlessly with any modeling tools or rules engine for immediate results.

ABOUT DATAVISOR

DataVisor is the leading fraud detection company powered by transformational AI technology. Using proprietary unsupervised machine learning algorithms, DataVisor restores trust in digital commerce by enabling organizations to proactively detect and act on fast-evolving fraud patterns, and prevent future attacks before they happen. Combining advanced analytics and an intelligence network of more than 4.2B global user accounts, DataVisor protects against financial and reputational damage across a variety of industries, including financial services, marketplaces, ecommerce, and social platforms.