

Trifacta Solutions for Fraud Detection

Data Wrangling Solutions to Accelerate Fraud Detection and Investigation in Financial Services

The financial services industry has a long and varied history of combating fraudulent schemes. Typically, that has involved check, credit card and wire fraud, but with the digitalization of banking services, financial fraud has now expanded to include cybercrimes. These cyber attacks can have a greater, more immediate impact on banks and their customers and come with costly consequences.

Internationally, organizations report an average loss of 5% of their annual revenues to fraud,¹ which can translate to trillions in losses. But monetary loss is only the beginning. For affected institutions, damaged reputations and customer relations can take years to reclaim. As a result, many financial institutions have pursued risk management solutions to better prevent and identify fraud.

Regulatory Compliance Considerations

To improve bank transparency, new regulatory laws require that financial institutions maintain years of historical data for review. Between the Dodd-Frank Act, Basel guidelines, Sarbanes-Oxley and FINRA/Tradeworx Project, bank records must be available on demand, or in some cases, sent to regulators on an ongoing basis. To protect this vast and growing information, institutions must manage their data diligently in order to defend against insider fraud, while also maintaining reporting obligations.

Data Challenges in Fraud Detection

The massive banking industry encompasses many subdivisions, including investment management or credit card lending. In addition, it operates across multiple channels—retail banks, ATMs, online call centers—to provide consumers with best-in-class products and services. While this widespread variety offers consumers incredible flexibility in wealth management, it also exposes banks to greater fraud challenges. With customers that have multiple accounts in different geographies and/or different business lines, perpetrators have an opportunity to gain access to customer information in one channel, then use it to commit fraud in another channel. For banks, it's a huge challenge to recognize fraud patterns across business lines and detect the initial source before perpetrators gain access to more channels.

Solution Highlights

By leveraging the software, analysts in financial services firms can:

- Enable fraud detection by dynamically adding data sets for exploration
- Capture data manipulation activity for compliance
- Improve cross-channel, product, entity monitoring for holistic view
- Ensure credibility of information for law enforcement, regulators and firms to act on
- Detect fraud faster and improve institutional capabilities to deliver knowledge more quickly
- Improve behavior monitoring of individuals to incrementally detect fraud and reduce false positives by using data across all of a customer's accounts and transactions
- Modernize data systems to support new products and innovations

Most banks today have fraud detection systems in place, yet this is typically reactive and often generate an overwhelming amount of false positives. The system has to be tuned consistently to be more efficient in capturing real frauds. Malpractices are also becoming more sophisticated and may require ad-hoc investigation augmented with specific data sources to detect patterns. It's a requirement to store historical activity and events, so to model, tune and research frauds effectively.

Unfortunately, geographic expansion, M&A and organizational silos have made gathering and formatting data from disparate repositories less than sufficient.

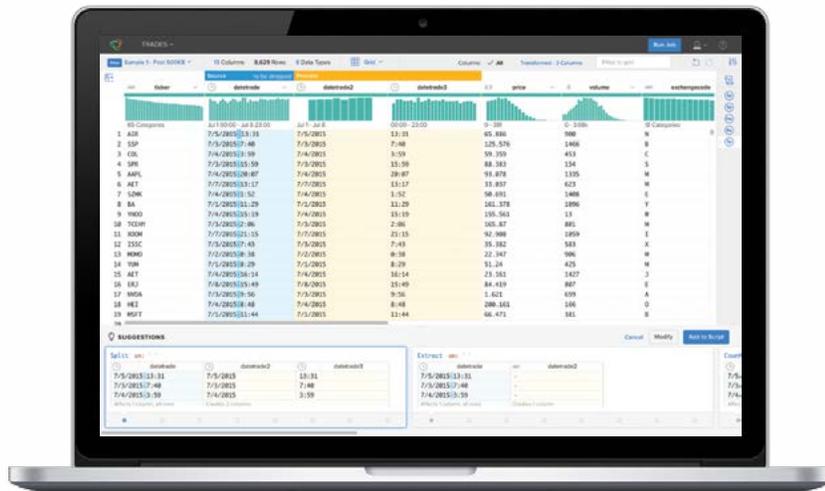


FIG. 1. USER INTERACTION PROVIDES INSTANT FEEDBACK AND RECOMMENDATIONS

The most effective weapon against fraud detection is technology that empowers analysts to quickly detect fraud signals amidst big data noise. That's where Trifacta can help. Trifacta's data wrangling software provides a robust and intuitive interface to support analysts in combining and cleaning diverse, messy data to arrive at intelligent insights faster. Using Trifacta to pinpoint fraud delivers enormous benefits to financial institutions, driving down costs and risks, improving customer satisfaction and enabling innovation.

Data Wrangling Solutions with Trifacta

In today's data environments, many organizations have adopted Hadoop to provide more powerful storage and processing. The scale and flexibility of Hadoop environments provide a "data lake" or "hub" to store any type of data set in its native format regardless of scale or structure. Given the technical nature of the Hadoop platform and the sheer complexity of data, IT teams often struggle to enable business teams to successfully leverage Hadoop.

While data sources in financial services are often overwhelming and constrained by IT access, Trifacta offers a completely new experience for data analysts, automating tasks previously only workable by data experts with programming skills.

“In order to have a visual interaction with data, you'd have to be a person with thirty years of experience in data transformation technology. Trifacta data wrangling gives you that kind of a view on the problems out of the box. ... It's not only that it has increased productivity, it's that we are now addressing things that we wouldn't even do before. I can't say how many times better it is than previously because previously it was zero.”

SPYROS MARKETOS

Data Scientist

Royal Bank of Scotland

Trifacta's unique approach to data wrangling applies the latest techniques in machine learning, data visualization and human-computer interaction, allowing users greater productivity and more autonomy over their data. With Trifacta, users can prepare complex, raw data for analysis in a matter of hours, rather than months, to greatly accelerate the detection of suspicious activities.

How Trifacta Works

Trifacta is designed to allow analysts to prepare data without manually writing code. Using Trifacta, analysts can visualize the content of data stored in Hadoop and interact with that content to build transformations that process the data in the desired output for analysis. Trifacta sits between the Hadoop platform, leveraged for data storage and processing; and the visualization, analytics, or machine learning applications used for a variety of downstream analysis across the organization.

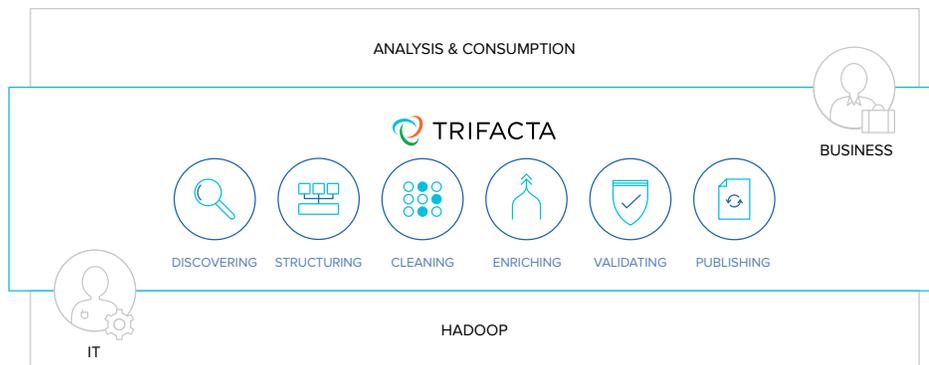


FIG. 1. TRIFACTA PROVIDES A WORKFLOW OPTIMIZED FOR TRANSFORMING DATA AT SCALE

How Financial Firms Will Benefit

Increase accuracy with better, faster, actionable data

Trifacta's data wrangling solutions help data analysts accelerate the detection of suspect behavior patterns by providing a superior approach to directly discover and transform complex, noisy data sets for analysis. Leveraging the full potential of Hadoop to cost-effectively store large, complex transaction data sets, both generated internally and with external real world unstructured data sources (e.g., call center logs, mobile/social texts, fraud consortium databases), Trifacta removes legacy inefficiencies and coding requirements enabling analyst teams to directly discover and transform data themselves. Banks can gain a holistic view of their customers' relationships, accounts, transactions and channels from a variety of sources to differentiate fraudulent activity from normal behavior.

Explore Historical Data with New Data Types for Investigation and Long-term Prevention

A Hadoop "data lake" allows analysts to combine historical data with new data types to investigate patterns of abuse over time. When fraud occurs, the data lake provides an opportunity for investigators to work with a larger pool of diverse internal and external data set to explore anomalies and find correlations and patterns that can assist in preventing future breaches.

Find out More

Call your Trifacta representative, or watch our Demo:
[Data Wrangling on Hadoop in Financial Services: Fraud Detection](#)

Save Time

By reducing the time to discover, structure, clean, enrich, validate and publish diverse data for analysis, Trifacta users can leverage more data in analytic exploration and experimentation, resulting in identifying fraudulent activity at a significantly faster pace. With Trifacta, analysts can transform complex data that normally takes months to complete, in a few hours, creating huge productivity gains and significant cost savings.

Empower More Business Users to Interact with Disparate, Complex Data to Find Insights

Trifacta's data wrangling solutions were built to empower business analysts, who have the most context for the financial services value chain, to directly access and manipulate raw, complex data without solely relying on IT. With the capability to automatically detect irregular or missing data, as well as provide a visual summary of complex data sources, Trifacta ensures business users can explore diverse data sources faster and more intuitively.

Enable Knowledge Sharing

By providing an interface that enables analysts of varying skill levels to wrangle data in Hadoop, Trifacta empowers a much larger pool of business teams and stakeholders to leverage customer data across the organization. In turn, this empowers more teams to identify and report fraudulent activity, as well as develop repeatable processes that can be learned and shared in order to spend more time identifying insights.

Trifacta Improves Fraud Detection

Trifacta provides the most reliable solution for financial institutions to leverage customer data from multiple channels combined with new data to accurately identify anomalies and prevent fraud schemes. Our goal is to help institutions reduce their risks, ensure they are in compliance with regulatory requirements and are protecting their customers and the banks' valuable assets.

About Trifacta

Trifacta, the global leader in data wrangling software, significantly enhances the value of an enterprise's big data by enabling users to easily transform and enrich raw, complex data into clean and structured formats for analysis. Leveraging decades of innovative work in human-computer interaction, scalable data management and machine learning, Trifacta's unique technology creates a partnership between user and machine, with each side learning from the other and becoming smarter with experience. Trifacta is backed by Accel Partners, Greylock Partners and Ignition Partners.

For Additional Questions, Contact Trifacta:

www.trifacta.com
844.332.2821

Experience the Power of Data Wrangling Today

www.trifacta.com/start-wrangling/

¹ ACFE, 2014 Report of Nations