THEFRAUDPRACTICE
INNOVATIVE STRATEGIES FOR ECOMMERCE PAYMENTS & FRAUD PREVENTION

THE RUNDOWN

Custom modeling solutions, whether they are built and managed in-house, provided through a third party or through a combination of both, can provide Business Intelligence, or BI, that helps organizations maintain effective risk management with access to rich data to review trends and monitor performance. These data and Business Intelligence features can not only help improve risk detection, but also provide an organization with an overall better understanding of their customers and business, with benefits to marketing, user experience teams and other groups outside of risk management.

Custom modeling is all about identifying trends and learning from data. When we talk about data we often hear terms like "Business Intelligence" or "Big Data", but let's explore what these terms really mean.

Business Intelligence, or BI, refers to data driven software solutions that enable organizations to more thoroughly understand and gain insight into their business operations through advanced reporting and analysis tools.

Business Intelligence is very pertinent to risk management. Understanding what transactions resulted in fraud, the characteristics of these users or transactions, and designing systems to detect and prevent this activity all rely on data analytics and BI.

Big Data refers to very large data sets which are computationally analyzed to reveal trends, associations and patterns, often related to human behavior and interactions. In other words, the significance of Big Data isn't just the size of the data set, but the advanced statistical modeling and analysis that finds complex patterns, connections and trends in the data.

CRITICAL CAPABILITIES THAT CAN ENABLE CUSTOM MODELING TO IMPROVE BUSINESS INTELLIGENCE

Sarasota, FL, June 10, 2015 / By: Justin McDonald, The Fraud Practice LLC

Big Data and Business Intelligence have become two common phrases in both the business world and mainstream media. It is likely that one has come across these buzz words more than once in conversation or in the headline of a news article in recent months. While the ideas these terms represent have many applications they are very relevant to fraud detection as organizations are continuously assessing users' behaviors and patterns to best define and detect high risk activity based on data. Experienced fraud professionals understand that how they define high risk is not static, rather it is continually changing as fraudsters, typical good customers and the goods or services an organization sells are dynamic as well.
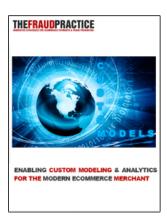
Many organizations seek to understand the dynamic nature of fraud and risk management by making use of data modeling to more accurately define high risk activity for their organization, as well as to track how this may be deviating from the previously defined norm. Whether built and managed in-house, provided through a third party, or through a combination of both, these custom modeling solutions can provide Business Intelligence, or BI, that enables the organization to maintain effective risk management by more quickly realizing changes in data and patterns, thus allowing the organization to more quickly adjust their risk management strategy in response.

It is also worth considering that solutions primarily intended for risk management may have Business Intelligence applications outside of fraud detection. For example, if systems are designed for digesting, interpreting and visualizing data, often these tools can be applied to sales and marketing aspects of a business as well. However, there are critical capabilities organizations should build or look for if they want to leverage such modeling solutions for effective Business Intelligence, both as it pertains to risk management and other aspects of a business. These capabilities include an organization being able to leverage all types of their own data and signals, being able to view and analyze data in real-time, as well as having an interface or platform to quickly access, analyze and review data. These capabilities can provide organizations with the ability to quickly recognize and adapt to changing behavior patterns or data trends, and each are discussed in more detail below.

Examples of using Big Data with risk management include issuing and acquiring banks that are analyzing data across all cardholders or merchant clients. Additionally, some of the largest merchants, such as the top five or ten on the Internet Retailer Top 500 list, have very high volume and large historical transaction data sets they leverage for risk management.

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Leveraging Any Data Point for True Custom Modeling

With custom modeling, risk models are designed and maintained based on an individual organization's own data considering their users, products and patterns, including both good and bad behavior, within their site or mobile app. While we tend to think of custom modeling being customized based on an organization's own data, there are also varying degrees of customization based on the types of data that can be utilized by models and analyzed in the platform or system. It's not only important for an organization to build models based on their own data and patterns, but to also consider the types of data they can make use of and whether this is limited or vast.

Typically with risk modeling there is a focus on individual or user level data, such as identity information and associated past transaction activity, as well as on historical transaction data aggregated across all good and bad customers. Some of this aggregate transaction data has applications outside of fraud detection, for example a merchant may be able to track the most frequently purchased items or SKUs in the past 6 months, not just the ones most targeted by fraudsters. Or merchants can see which SKUs are commonly purchased together for suggesting cross-sale opportunities.

A major difference across modeling solutions, whether homegrown or provided by a third party, is whether the merchant can leverage any data point they are able to provide, or if the system can only digest a predefined set of fields or variables. For example, a merchant may use other services for website behavioral analytics which may provide more complex and granular feedback in addition to a behavioral risk score, or they may use other User Experience (UX) tracking tools more focused on good buyer behavior and abandonment or drop-off points. An important consideration is whether these more specific data signals, such as the page or even the data input field a user was on when they left the site and abandoned the transaction, can be utilized within the custom modeling solution or platform.

There are many relevant applications for feeding this data into a modeling solution or platform to at least visualize and manually analyze the data, even if not using it for any risk models. Merchants can compare variations of a marketing promotion or A/B test website tweaks or redesigns they are considering relative to how the site looks today. Although access to view and analyze this data is within the interface or platform, which is discussed next, merchants should be sure they understand what kinds of data can be utilized and accessed via the modeling tools and platform. If an organization plans to use these tools to also improve Business Intelligence for marketing and other areas of the business, it is important to really understand how customized the custom modeling can be.

A Platform to Visualize and Interpret the Data

There is a lot going on behind the scenes to build custom models, from corralling large amounts of data to performing sophisticated statistical analyses and facilitating the infrastructure to transmit data and apply models on live transactions. These feats require a very high level of technical skill across multiple areas of expertise, but this doesn't mean that the end user should have to master each of these skills as well. That is why a platform, or Graphical User Interface (GUI), that enables risk and data analysts and managers to access reporting features and review data trends is a critical capability.

A good platform accompanying a custom modeling solution should provide access for non-technical users to review and visualize data so they too can identify trends, look for patterns and investigate any changes or abnormalities they are seeing in data or user behavior. One aspect of the platform is to provide access to review the performance of models to see when they may need to be refreshed or updated, or to build out new segments and models by defining new parameters. Another aspect of the platform is data reporting and investigation. This research and data reporting is often performed to improve risk models and investigate new fraud trends that are emerging, but has applications outside of risk management as well.

The reporting and data visualization or graphing tools may be provided more to help manage and maintain risk models, but may also be able to leverage sales, abandonment and UX data. The significance of the interface or platform is that a manager or analyst can access the system to quickly review summary information and statistical analysis of the specific data they want to investigate without needing to write elaborate SQL queries. Just as a risk manager can utilize these reporting and data analysis tools, a marketing manager should be able to run reports on sales and conversion rates to see which email marketing campaigns drove the most site visits and sales. If the one platform can be leveraged to accomplish both of these tasks, it is all the better.

Effective custom modeling can revolutionize fraud detection by leveraging modern technology applied to an organization's data. With the right capabilities and solutions these services can also provide ancillary benefits outside of risk management. To maximize the potential of these additional benefits, an organization should be sure that models and tools are tuned to their data and specific needs, and that they have access to their data for real-time analysis, decision making and reporting through an easy to use platform or portal.

Cristina Soviany, CEO, Features Analytics

are over 50 Fraud Prevention Technique pages in the Fraud Library, including one for Modeling and Analytics.

ABOUT THE FRAUD PRACTICE

The Fraud Practice is a privately held US LLC based in Sarasota, Florida. The Fraud Practice provides consulting services on eCommerce payments, fraud prevention and credit granting as well as prepared research and online training for payment and fraud professionals. Businesses throughout the world rely on The Fraud Practice to help them build and manage their payment, fraud and risk prevention strategies.

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The Significance of a Real-Time Solution

Being able to leverage any data point and being able to analyze and investigate any and all of this data in the platform are important capabilities, but another consideration is how quickly data can be made available for review and analysis. If transactions run through models in batches then it is very likely that information on transactions cannot be flagged for a closer look or accessed via the platform until the batch has been processed. When instead data is processed in real-time or near real-time, aberrations in data or emerging trends can be identified and reviewed more quickly. An important consideration for organizations that plan to use modeling solutions to advance Business Intelligence capabilities is not only that models can run on transactions in real- or near real-time, but also that this information is made available for reporting and analysis in the platform.

The significance of more immediate access to data is that it provides organizations with increased ability to quickly pivot, or adjust their strategy, in response to changing trends or abnormalities in the data. This is crucial for efficient risk management because the longer an emerging fraud trend or significant pattern goes unnoticed the longer an organization is vulnerable. For example, if there is a lot of fraud activity all of a sudden coming from a particular IP address or region, a risk department head may opt to segment that IP address or region and handle it separately. Conversely, if many good customers start showing behavior or characteristics that were associated with fraudsters in the past and this is now resulting in more orders being declined or sent to review, real-time access to data can enable analysts to more quickly recognize the problem and investigate what is causing it. The quicker the issue can be addressed the better the losses can be contained, whether that's fraud losses or lost sale opportunities.

Another great benefit of real-time data tracking is that when changes are implemented the results can be monitored in real- or near real-time. This can be very important if an organization is launching a new product line, a new promotion or is entering a new market abroad. Without a history of transactions and data in that region or related to the new product line, the organization may feel like they are in uncharted waters. However, if organizations can review data as transactions occur in real-time, then adjustments to their risk strategy can be made when the reporting and data analysis tools show new or unexpected trends. Typically organizations are not launching new products lines or expanding to new regions too often, but there are several sales conversion and marketing applications with this as well. For example, UX analysts may want to track how users are responding to a redesigned website in real-time just to be sure it is well received.

Conclusions

Real-time custom modeling can enhance Business Intelligence capabilities leading to not only improved risk detection, but an overall better understanding of your customers and business, which benefits other areas of the business outside of risk management. When building or buying custom modeling solutions for risk management, many of the capabilities and features will contribute to the additional benefits in other departments or groups, such as marketing and front-end or user experience analytics.

Custom modeling solutions can facilitate and improve Business Intelligence, but the primary capabilities to build or look for to encourage success are having flexibility in the data that can be provided or analyzed, having access to customizable reporting and analysis tools in a platform with an easy to use interface, and being able to track and analyze data in near real-time. The combination of these capabilities within a custom modeling solution can greatly increase an organization's visibility and understanding of customer and sales data to make more informed decisions relating to risk management and beyond.

Post Questions and Comment Here

ADDITIONAL RESOURCES

FEATURES ANALYTICS - CUSTOM MODELS TO DETECT FRAUD
Features Analytics specializes in custom modeling for detecting payment fraud with solutions for eCommerce merchants, card issuers, acquirers and payment processors. These solutions are powered by eyeDES™ - a proprietary fraud detection and risk management platform for model design and execution. Our experienced team of data analysts delivers multiple models that can be applied in real-time to different segments or channels. These models can be easily managed, retrained and exchanged in production.

QUICK LINKS

With Custom Modeling, Deployment is Just as Critical as Design

Fraud Library Technique Page: Modeling and Analytics

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ENABLING CUSTOM MODELING & ANALYTICS FOR THE MODERN ECOMMERCE MERCHANT
This white paper is intended to demystify the complexity of custom modeling while providing a working knowledge of the capabilities and questions merchants should know if they are considering the use of custom modeling and analytics.

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