prelert

Retail Order Analytics
Data Sheet

# Anomaly Detective® App
for Splunk®

Prelert Behavioral Analytics: Let Your Retail Order Data Tell the Story

Online retailers, whether multichannel enterprises, direct-to-consumer manufacturers, or global eCommerce entities, rely on an expanding set of technology components to implement their digital infrastructure — digital commerce platforms, back office integration, Internet of Things beacons, social commerce, and increasingly advanced analytics or business intelligence platforms.

The challenge is that many business intelligence platforms can be difficult to deploy, requiring huge investments of time and money. Even after they've been deployed, companies often don't know how to get the full value out of them. Worse, many of these platforms require significant hand-holding, with operations teams having to manually monitor systems, make decisions about how and when to add new alerting thresholds and sort through seemingly endless amounts of false positive alerts.

Prelert's unsupervised machine learning-based behavioral analytics as applied to retail order metrics provides one of the most critical functions of advanced analytics, which is automated near-real-time anomaly detection on key business performance metrics. This enables early detection of events that could cause a negative impact to the overall business. For businesses running thousands, millions, or even billions of dollars' worth of transactions every day, the impact of this can't be overstated.

A key use case common to many retailers is understanding typical transaction behavior for their business (e.g. orders per minute, carts created per minute, invoices per hour, or deposits per hour). If the behavior significantly deviates from what is expected for a particular hour of day, or day of week, retailers need to receive an alert so that the root cause can be quickly identified and remediated, minimizing negative business impact.

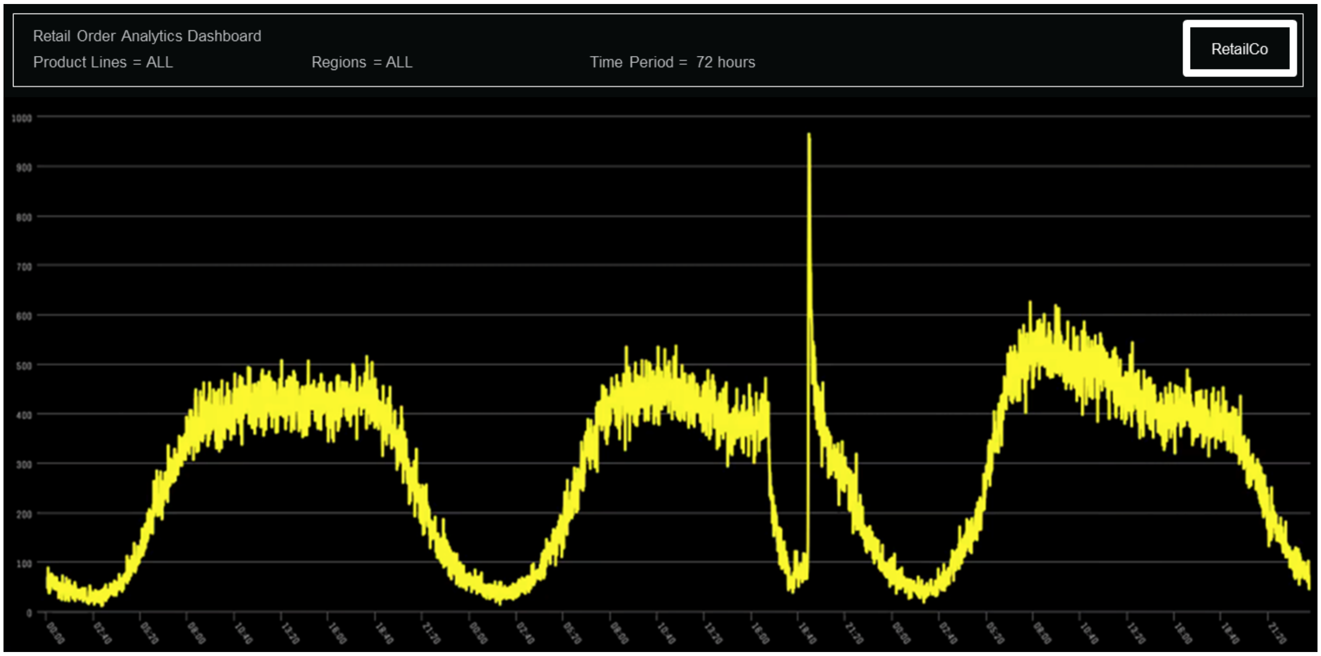
Retail Order Analytics Dashboard
Product Lines = ALL
Regions = ALL
Time Period = 72 hours

Figure 1: Example retail orders showing revenue-impacting anomaly in order stream

In the above diagram it's easy for humans to spot the anomaly in this 72-hour data set after-the-fact, but using Prelert's Order Detective solution enables you to detect anomalous activity only minutes after it begins.

Prelert's Unsupervised Machine Learning Finds Anomalies in Retail Order Data

Automatically Detects Periodicity

Retail order data is periodic, with daily, weekly, or perhaps monthly cycles to it. Prelert accurately uncovers unusual behaviors in data, while taking into account its natural periodicity. Prelert's machine learning anomaly detection automatically learns the periodic "harmonics" in your data, and accurately finds deviations in expected behavior that can indicate problems.

Automatically Adapts to Changing Data Patterns

Another challenging aspect of performing anomaly detection on retail order data is the fact that real data patterns change over time, perhaps due to a new product line becoming available, or the launch of a new book, movie, or album. Prelert's anomaly detection algorithms quickly learn new patterns and stop flagging new patterns as anomalous. Other approaches, for example those based on supervised or trained machine learning, would generate a constant stream of false positive anomalies until their models were manually re-trained on the new normal data.

Enables Faster Root Cause Discovery

Prelert's algorithms learn minute-to-minute what is normal for your environment. With Prelert, retail operations teams can now get the full story behind revenue-impacting issues and problems, while involving fewer people in the triage process, faster than with manual analysis.

Why Retail Operations Teams Choose Prelert's Retail Order Analytics Solution

Company: Large Online & Brick and Mortar Retailer

The Challenge: This company's eCommerce team needs to track how many orders they receive per minute online. Any anomalies in this data could indicate an outage or other issue that, because of the volume of their commerce, could easily cost hundreds of thousands of dollars.

How Prelert Helps: Prelert behavioral analytics provides them with precise, accurate periodicity-aware anomaly detection that helps minimize losses by catching issues faster, allowing them to resolve issues in a timely manner. This company has detected a number of different issues that could have had a major impact on revenue if not detected early, ranging from process-related issues such as failure to renew an SSL certificate, operational issues such as server failures or application errors, and even external factors such as aggressive competitive marketing campaigns.

Company: Online Dating Website

The Challenge: Like any revenue-generating website, this company knows that operational problems can cost money, so the faster they are found the more money they will save. Before adopting Prelert's behavioral analytics solution, they set thresholds that required manual configuration and maintenance. These rules couldn't account for periodicity such as typically slow days or slow hours, or any other periodic dips, so their incident response teams were continually deluged with false positives—and still missed real incidents.

How Prelert Helps: With Prelert, the company now monitors hundreds of key metrics related to revenue and user behavior in near-real-time. Since implementing Prelert, they have been able to quickly discover anomalies in revenue metrics, pinpoint the cause(s), and resolve issues. For example, they were able to spot a bug in their USD to JPY conversion code that was costing them 40 cents on the dollar on every Japan-originating transaction. They were also able to spot a bug on their payment screen and analyze revenue across countries, ISPs, platforms, and more—capabilities they did not have before implementing Prelert.

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Company: Consumer-Facing Division of Telecommunications Provider

The Challenge: This division sells mobile telecommunications services and products online. They need to be sure that there are no outages or errors so their customers can purchase products and service online with minimal friction.

How Prelert Helps: Using Prelert's anomaly detection technology, the company is able to receive alerts when any anomalous dips in total volume or individual type of online orders are seen. With Prelert, this division has reduced the number of alerts they need to investigate, and investigated far fewer false alarms than before, allowing them to focus on the real issues.

System Requirements:
info.prelert.com/system-requirements

DOWNLOAD FREE TRIAL

www.prelert.com

Or call us to learn more (888) PRELERT or +1 (508) 319-5322

About Prelert

Prelert is the leading provider of behavioral analytics for IT security, IT operations, and business operations teams. The company's solution analyzes an organization's log data, finds anomalies, links them together and lets the data tell the story behind advanced security threats, IT performance problems, and business disruptions. Leveraging machine learning anomaly detection and other behavioral analytics capabilities, the solution automates the analysis of massive data sets, eliminating manual effort and human error. Hundreds of progressive IT organizations rely on Prelert to detect advanced threat activity, reduce false positive alerts and enable faster root cause analysis. Prelert lets your data tell the story.