

Retail Use Cases

Below are a few use cases that illustrate how big data and Hadoop are being leveraged by retailers to develop closer relationships with customers, be more competitive, and create entirely new kinds of shopping experiences.

Up-Sell/Cross-Sell Recommendations

Providing up-sell and cross-sell recommendations to customers is the mostly widely adopted big data use case in the retail sector. This enables retailers to increase online purchases by recommending relevant products and promotions in real time. Retailers can recommend products based on what other similar customers have bought—providing upsell, cross-sell or “next best offer” opportunities. The MapR Converged Data Platform provides real-time capabilities that enable recommendations to be delivered at the right time and place to the right device. It can also improve customer loyalty by providing a more relevant, personalized online experience. Recommendations can benefit from a much broader context, not only checking which combinations are most likely, but also, based on a very fine-grained “graph analysis,” identifying a closely related peer consumer group.

Social Media Analysis

Consumers can use social media to exert tremendous influence over a retailer’s brand or a product’s success. Retailers need to monitor online sentiment and respond in real time with relevant messages or offers. The MapR Converged Data Platform allows for real-time ingestion of streaming data that helps retailers get the information they need fast. Retailers thus gain insights into consumer behavior and social relationships by analyzing not only their online behavior and prior transactions but also social network activity. They can aggregate multiple streams of unstructured social media data and user-generated content across multiple channels.

Dynamic Pricing Across Multiple Channels

When consumers are able to shop across multiple channels in real time, slight differences in pricing can make a difference in their purchase decisions. Dynamic pricing across multiple channels is not new, but big data allows for a more refined set of indicators for price elasticity in comparison with traditional influencers such as time and availability. Other indicators include the weather, the location, the complete buying profile and social media presence of a customer. The MapR Converged Data Platform allows retailers to build models that take into account these additional variables and incorporate them into real-time pricing strategies.

Fraud Detection

Retail fraud can range from fraud in returns or abuse of customer service, or credit risk for larger purchases, based on, for example, uncovering fraud rings, social media activity of customers and detecting patterns. It can also be major security breaches putting private customer information at risk. Retailers need to protect their margins and their reputations by proactively detecting fraudulent activities. The MapR Converged Data Platform can help retailers identify anomalies and patterns by putting in place continuous monitoring tactics that look for unusual patterns in product and inventory movement. This can help indicate incidents of fraud such as shrink and store associate theft and look for exceptions. Over time, models can be built that utilize machine learning and provide more predictive capabilities that can trigger actions when exceptions are encountered.

Clickstream Analysis

Retailers can increase website revenue and create more engaging customer experiences by analyzing consumer clickstreams. MapR can help retailers capture, analyze and gain actionable insights from data across multiple channels including search, ads, email and web logs. By analyzing clickstreams they can better understand

how consumers make online purchase decisions and then optimize web pages/offers to increase conversion, and lower cart abandonment. The MapR Converged Data Platform accelerates analysis cycle time and rapid actions: ingests data faster, enables streaming writes to update models and target customers quicker.

Loyalty Program Benefits

Big data extends the channel reach of loyalty program benefits from point of sale, Web and call centers to mobile and social capabilities. Customers can accrue rewards by more than purchases; rewards can be earned for being good product or brand ambassadors or through social relationships. The MapR Converged Data Platform can help retailers capture, analyze, and report on individual customer activity over time, enabling them to provide personalized and differentiated attention to their best customers.

360° Customer View

Retailers can improve customer satisfaction and sales opportunities by integrating all relevant customer data across online transactions, POS transactions, social media, and customer service interactions into one single view. The MapR Converged Data Platform can be used as an Enterprise Data Hub to combine these various sources of data into one repository and obtain that single view. Customers use email, chat and social media to communicate on an everyday basis. Getting a handle on not just their prior transactions but also likes and dislikes about their experiences is critical. Retaining customers is a key metric for retailers, given the cost of acquiring new customers.