

Bring Clarity to Retail Decision-Making with Machine Learning

by Sarah Pierson and Steve Riordan

Big data has been a dynamic area of innovation in recent years. Smart connected scanners, devices, and machines have generated an avalanche of information, prompting us all to become more efficient in collecting, organizing, and managing our data.

Now the challenge becomes how to monetize that information.

Retailers face many unique questions:

How can customer on-line experience information and feedback tie into sales and returns monitoring?



How can social media content, competitor information, and environmental factors be layered into performance reporting?

How do current trends influence future trends and inform new product development?



Retailers and brands have the opportunity to leverage internal, external, structured and unstructured data to make better design and development decisions through the advanced analytics of digital technologies such as artificial intelligence (AI) and machine learning (ML).

What is Machine Learning?

ML is a subset of AI that is fueled by big data and provides computers the ability to learn without explicit programming. Algorithms are created to assess a myriad of data and find correlations to sales. These correlations are systematically refined, based on more history and feedback, resulting in improved accuracy over time.

ML solutions recognize patterns by considering many more factors than humanly possible. ML employs natural language processing to translate consumer sentiment on products and brands gathered from sources such as call centers and social media. That European designer's dress, worn by that A-list celebrity, trending on social media, and touted by that known fashion critic as the "next big thing" is a ML-provided recommendation that was on your desk last month. Think of ML as an immensely scalable and "always on" digital workforce.

Potential Applications of Machine Learning for Retail

The potential for ML in retail is massive. Its sophisticated techniques and tools typically go beyond those of traditional business intelligence to discover deeper insights.

Some potential use cases for ML:

- **Mine returns data, social media reviews and call center complaints** to identify potential defects or opportunities for design improvements.
- **Detect brand, product, and consumer trend patterns to identify emerging sales opportunities** by monitoring and analyzing retail competitors, social media, trend-setting celebrities, and fashion authorities.
- **Optimize initial buy quantities and allocate to channels based on sales data** combined with online traffic, mobile apps, and digital in-store interactions to identify customer buying trends at local levels.
- **Optimize recommended initial retail price based on known demand curves of similar items** combined with feedback from consumers, web/mobile site, stores, and wholesale customers.
- **Detect patterns in country sourcing dynamics by monitoring and analyzing country** labor rates, political and military news, regulatory changes, and other variables.

Think Forward. Act Now.

Transform your business by driving product differentiation – there are two options for getting started with ML.

Option 1: Align on a Program

This is the best starting point when there is a need to produce a compelling case for change and a roadmap to get support. Start by building a proprietary vision of the future, perform an honest assessment to identify the gap between current state and future vision, and build a game plan to address the gap. Then work to define the program and build a business case to gain buy-in and

support, and the develop a 2-3 year roadmap.

Option 2: “Get Started, Get Better”

This is the best option when leaders have an idea of major opportunities and agree on initial areas of focus. Use success from the first initiative to build a broader case for change and a roadmap.

Now is the time for retailers to invest and gain the benefits of an exciting new tomorrow, ushered in by machine learning.

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Steve has dedicated his entire 30-year career to serving retailers and