

DATA ANALYTICS SERVICES CASE STUDY

New ordering system uses machine learning to optimize pricing and simplify order process



Retailers are shoppers, too

A national retailer is deploying cloud technology with machine learning and artificial intelligence capabilities to provide its network of more than 4,500 independent retail stores with a state-of-the-art ordering solution.

Its previous ordering system was built on a mainframe-based environment, which was overwhelmed by a growing network of stores and an increasingly complex product catalog. As an older system, it couldn't keep up with growing sources and volumes of data, and was difficult to integrate with store point of sale (POS) systems, mobile devices, and other modern technologies.

The company experienced a number of challenges that put it at risk of losing customers and potential new stores to competitors with lower prices, better product selection, and more advanced technology:

- Outdated and inaccurate inventory data
- Limited or no visibility into competitive pricing
- Slow, multi-step ordering process
- Print catalogs that are quickly outdated

Cloud-based order management portal

The client engaged Wavicle to build a modern ordering solution that makes it faster and easier to evaluate and optimize prices, search and order products, and manage inventories. The solution includes a web-based order management portal powered by cloud technologies that enable faster integration and analysis of more data from more sources.

The company now draws product data from the original mainframe database into a cloud data warehouse, where it is combined with competitive pricing data that is updated regularly.

It uses machine learning algorithms to match the company's products with other vendor products and pricing, which not only shows competitive pricing, but eventually will enable them to optimize pricing models based on the ever-growing data history.

This high-performance system allows the use of more digital product images and scanning technologies, which improve and accelerate the users' ordering experience. It also integrates with store point-of-sale systems, which greatly improves their inventory management.

The solution included several components:

- Amazon S3 data lake
- Amazon Redshift data warehouse
- Talend data integration
- Machine learning and artificial intelligence algorithms
- React JS and .NET framework for order management portal with web and mobile access
- Content management system to personalize stores' home pages and easily update content

Solution delivers rich product and pricing insights

The new order management system delivers a more accurate, personalized, and meaningful ordering experience for stores and gives customers the confidence that they will find the products they need when they need them.

Store managers and owners spend less time ordering products and managing inventory thanks to faster and more accurate search results, more digital product imagery, and integration with modern technologies such as scanners and mobile devices.

The company's leadership is thrilled with the results:

- Faster, easier, and more accurate ordering process leverages digital scanners and mobile technology, rich digital imagery, and better search results
- Simplified inventory management with POS integration
- Readily available competitive insights and historical pricing data
- A user-friendly online catalog that is quick to customize and eliminates the need to print and ship thousands of quickly outdated catalogs to the stores



About Wavicle Data Solutions

Wavicle Data Solutions specializes in rapid delivery of data and analytics solutions. We help clients leverage cloud-native technologies to capture, analyze, and share growing volumes of data for advanced analytics, machine learning, and artificial intelligence. Our mission is to enable fast access to data by combining automation with deep technical expertise, strong industry knowledge, and flexibility. Our value is helping enterprises imagine new ways to manage costs, increase sales, and become more efficient.

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