

A red sports car is shown on an automated assembly line in a factory. The car is positioned on a blue robotic arm that is part of a larger automated system. The background shows other parts of the factory, including another car being assembled and various mechanical components. The overall scene is brightly lit with industrial lighting.

HEXAWARE

Transforming Retail Product Recommendations at Scale with ML

ML-powered retail product recommendations

Case study

Client

| Client

- Challenge
- Solution
- Benefits
- Summary

An American Automotive Retailer

The client is a leading retailer of automotive parts and accessories in the United States, serving millions of customers through an extensive network of stores and digital platforms. Known for its commitment to quality, convenience, and exceptional customer service, our client offers a diverse range of products and solutions to help drivers maintain and enhance their vehicles.



Challenge

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Stagnant Growth in a Dynamic Marketplace

The client faced mounting challenges in driving growth and customer engagement. Despite having a rule-based recommendation engine, the retailer struggled with ineffective upsell and cross-sell strategies, generic product suggestions, and fragmented data. Operational complexity and high maintenance costs further slowed innovation, while the lack of personalization eroded customer trust and conversion rates. These barriers highlighted the urgent need for an intelligent, scalable solution to transform retail recommendations.

- **Ineffective Upsell & Cross-Sell**
The rule-based recommendation engine delivered no significant increase in cross-sell or upsell revenue and failed to leverage purchase histories or adapt to market changes.
- **Lack of Personalization**
Recommendations were generic, ignoring buying patterns, regional nuances, and seasonal factors, which reduced customer trust and sales effectiveness.

- **Operational Complexity**
Maintaining and updating the engine across hundreds of stores was labor-intensive and prone to errors, resulting in inconsistent performance and delayed rollouts.
- **Siloed Data**
Customer transactions, store performance, and third-party data remained fragmented, preventing the creation of a unified analytics ecosystem.
- **Missed Revenue Opportunities**
Store associates could not drive incremental sales without personalized recommendations.
- **Low Conversion Rates**
Generic add-on suggestions led to poor acceptance and a decline in customer confidence.
- **High Maintenance Costs**
Manual processes increased operational overhead and delayed innovation.



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Intelligent, Layered ML-powered Recommendations

To unlock new growth, Hexaware introduced a machine learning (ML)– powered retail product recommendation system, revolutionizing how the client engaged with its customers at checkout.

- **Personalized Recommendation Engine**
Leveraged ML models to analyze purchase history, product affinities, and demographics, delivering tailored recommendations for each shopper.
- **Context-Aware Insights**
Integrated external data such as weather and seasonality to dynamically adjust recommendations, e.g., promoting wipers during rainy spells.
- **Automated, Scalable MLOps**
Built custom MLOps pipelines on Google Cloud Vertex AI to streamline model training, deployment, and monitoring across all locations.
- **Seamless Store Integration**
Designed a real-time interface for associates, ensuring intuitive delivery of recommendations at checkout for high adoption.

- **Continuous Feedback and Governance**
Implemented feedback loops and governance frameworks to enable ongoing model improvements and transparent performance tracking.
- **Simplified Workflows**
Conducted in-store observations and workshops to keep processes simple and unobtrusive.
- **Lightweight Architecture**
Deployed a lightweight system for rapid rollouts with minimal downtime.
- **Associate Interaction Tracking**
Enabled associates to mark recommendations as “accepted” or “rejected,” refining the system continuously.
- **Centralized Performance Dashboard**
Provided real-time, region-wise performance reviews and A/B testing through a centralized dashboard.



Benefits

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Driving Measurable Impact Across Revenue, Engagement, and Efficiency

The implementation of ML-powered recommendations and MLOps delivered measurable business impact across key performance areas. From revenue growth to operational efficiency, the results speak for themselves.

- **Revenue Uplift – 10% Growth in 3 Months**
Pilot stores achieved a 10% increase in cross-sell and upsell revenue by delivering precise, relevant recommendations.
- **Higher Engagement – 22% Lift in Acceptance**
Weather and seasonality data made suggestions more relevant, driving a 22% increase in acceptance rates.
- **Operational Efficiency – 60% Faster Deployment**
Deployment timelines for updates were reduced by 60%, shortening the rollout from weeks to days.
- **Consistent Regional Performance**
Nine out of ten pilot regions reported revenue growth, with the highest gains in weather-sensitive categories.
- **Enhanced Customer Experience – 15% More Helpful Interactions**
Customer surveys revealed a 15% increase in the perceived helpfulness of associate suggestions, which in turn boosted satisfaction and trust.



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Client's Journey to Intelligent Retail

Today, the client is experiencing a fundamental transformation in its retail operations. The AI/ML-powered recommendation engine drives measurable revenue growth, delivers personalized experiences, and enables rapid innovation at scale. Operational complexity has been significantly reduced, store associates are empowered, and customers are receiving more relevant and timely product suggestions. With Hexaware's solution, the client continues to lead the way in intelligent automotive retail, leveraging data and technology to delight every customer, every time.



Ready to Transform Your Retail Recommendations?

Unlock measurable growth, personalized customer experiences, and operational efficiency with ML-powered retail product recommendations and MLOps. Learn more about our services for Retail by reaching out to **marketing@hexaware.com**.

About Hexaware

Hexaware is a global technology and business process services company. Every day, Hexawarians wake up with a singular purpose: to create smiles through great people and technology. With this purpose gaining momentum, we are well on our way to realizing our vision of being the most loved digital transformation partner in the world. We also seek to protect the planet and build a better tomorrow for our customers, employees, partners, investors, and the communities in which we operate.

With offices across the world, we empower enterprises to realize digital transformation at scale and speed by partnering with them to build, transform, run, and optimize their technology and business processes.

Learn more about Hexaware at <https://www.hexaware.com>.

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