

Bylined Article

How GenAI and AI Are Going Mainstream in Retail

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Retail has always been at the forefront of technological change. Today, AI and Generative AI (GenAI) technologies are entering mainstream operations, reshaping customer engagement, store management and operational efficiency.

Maturing AI is improving customer experiences and creating efficiencies behind the scenes, ultimately giving retail a new competitive edge. Here are my thoughts on how AI is becoming integral and what it means for the future of the retail industry.

1. Enhanced Personalization and Customer Experience

Hyper-personalization is one of the most significant ways AI is impacting retail. AI algorithms can process vast amounts of customer data, enabling brands to deliver real-time tailored recommendations and promotions. In-store AI powers virtual shopping assistants that guide customers, suggest complementary products and answer questions about product specifications. GenAI also dynamically generates online custom shopping experiences, delivering product suggestions based on browsing history, past purchases and predicted preferences.

AI-powered recommendation engines now incorporate GenAI's language capabilities, making them more interactive and user-friendly. A GenAI assistant can respond to a customer's specific shopping needs, such as "looking for a gift for a teenager" or "suggestions for eco-friendly skincare". Shoppers get nuanced responses that feel conversational. This level of responsiveness is reshaping retail, as each customer interaction is an opportunity to build brand loyalty through relevance and immediacy.

AI chatbots with natural language understanding are another exciting step as retailers can offer seamless customer service across digital channels. AI assistants can now handle frequently asked questions, manage returns and direct customers to the right departments, providing 24/7 support. As they improve accuracy and complexity, AI assistants create efficiencies for retailers, freeing human staff for more complex inquiries and enhancing overall customer satisfaction.

2. Optimizing In-Store Operations with AI

AI's benefits also impact streamlining in-store operations. Computer vision technology, combined with fast 5G connectivity, is transforming inventory management, enhancing checkout accuracy and optimizing store layout. More and more stores are using AI-powered cameras to monitor shelf stock in real time, ensuring that popular products are replenished quickly. Reducing out-of-stock scenarios ensures retailers minimize lost sales opportunities and increase customer satisfaction.

Self-checkout has become a critical application. GenAI and computer vision identify potential theft by monitoring how items are scanned and identifying unusual behavior. This reduces shrinkage and deters shoplifting.

AI's predictive analytics capabilities are helping retailers make smarter, data-driven decisions regarding inventory forecasting and staffing. With real-time data on customer traffic patterns, weather conditions and buying trends, AI can predict demand surges or lulls, allowing managers to optimize stock levels and workforce schedules. This agility is essential for staying competitive while managing costs efficiently in a fast-paced retail environment.

3. Creating the Store of the Future with AI-Driven Insights

Perhaps one of AI's most transformative roles in retail is shaping the "store of the future." As I mentioned in my previous article, retailers increasingly use AI to manage and optimize operations, and physical stores are evolving from transactional spaces to experiential hubs. Computer vision and GenAI's analytical capabilities draw insights from customer movements and interactions in a store, helping retailers better understand which product placements and displays are most effective and determining how adjustments to a store's layout can influence customer flow.

Fujitsu's Kozuchi AI platform offers retailers an integrated AI solution that includes applications like the 3D Store Optimizer. This creates a 3D model of a store's layout, identifying high-traffic areas, popular product displays and potential friction points. Stores gain valuable insights that enable improved layout design and shelf organization to maximize sales potential by aligning product placements with actual customer behaviors.

AI also plays a role in sustainability. It optimizes energy consumption by analyzing lighting, temperature and equipment usage, allowing retailers to align operational efficiencies with sustainability goals. As more businesses prioritize environmental responsibility, AI's ability to reduce resource consumption is becoming a valuable asset. AI can adjust settings based on store occupancy and other conditions through real-time monitoring, helping retailers cut energy costs while minimizing their carbon footprint.

4. Moving Toward a Unified Retail Experience

Retail is moving toward a unified commerce model where data, inventory and customer interactions are seamlessly connected. Unified commerce allows customers to experience the brand consistently across every touchpoint. GenAI's ability to interpret and connect customer interactions across channels allows retailers to deliver a cohesive experience that keeps customers engaged whether they're shopping online, in-store or through social media.

Retailers leveraging real-time predictive analytics can dynamically adjust to customer needs and preferences. For example, if a product runs low in-store, AI can suggest the nearest location with stock – or offer the customer a personalized online ordering option. This continuous data flow across channels improves customer experience and maximizes operational efficiency.

GenAI and AI are fundamentally altering customer experience and behind-the-scenes retail operations. From personalization to inventory management and unified data integration, AI helps retailers create more agile, responsive and efficient environments. The shift isn't just an enhancement. It represents a new era in retail where data and insights power every interaction, every shelf and every decision.

The successful integration of AI will be a defining factor for retailers aiming to remain competitive in an increasingly digital landscape. By embracing these advancements, retailers are not just meeting current customer demands: They are creating the future of retail.

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Richard is responsible for bringing the best of Fujitsu's industry vision, consulting capabilities and solutions and services to its customers in the consumer industries across the world.



Reporting into Fujitsu's global leadership in Japan, Richard and his team develop and execute compelling and relevant strategies to expand key markets and define differentiated propositions to meet the needs of existing and new customers.