# Common AI Use Case by Industry: Retail

In the table below we list the most common AI uses cases by industry. The ‘Business Value Score’ column rates expected business impact on a scale from 1 (least impact) to 10 (highest impact). The ‘Difficulty to Implement Score’ column rates the difficulty to implement (time, cost, effort, etc.) on a scale from 1 (easiest to implement) to 10 (hardest to implement). Note these are estimates and will vary from customer to customer.

| **Business Metric** | **Use Case** | **Description** | **Azure AI Solutions** | **Azure AI Solution Description** | **Business Value Score** | **Difficulty to Implement Score** | **Enhance with Azure OpenAI** |
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| Increase in Sales Conversion Rate | Personalized Recommendations | Suggest products based on customer data and shopping patterns. | Azure Machine Learning, Azure OpenAI | Provides personalized product recommendations using customer data and NLP insights. | 9 | 7 | Leveraging advanced natural language models to analyze customer interactions and preferences, enabling more nuanced and tailored product suggestions. |
| Inventory Turnover Ratio | Customer Demand Forecasting | Predict future product demand based on historical sales data and external factors. | Azure Machine Learning | Forecasts customer demand to optimize stock levels and reduce overstocking. | 8 | 6 | Analyze market trends, customer feedback, and historical sales data, enabling more accurate demand predictions. |
| Profit Margin Improvement | Pricing Optimization | Dynamically price products considering factors like demand and inventory levels. | Azure Machine Learning | Optimizes pricing strategies based on market trends and customer behavior. | 8 | 7 | Analyze competitive pricing data, customer purchasing behaviors, and market trends, thereby enabling dynamic and strategically optimized pricing |
| Reduced Chargeback Rate | Fraud Detection and Prevention | Identify and prevent fraudulent activities by analyzing transaction patterns. | Azure Machine Learning | Detects and prevents fraudulent activities using advanced analytics. | 7 | 6 | Analyze transaction patterns and communications, thereby identifying potential fraudulent activities with greater accuracy and speed. |
| Supply Chain Efficiency | Supply Chain Optimization | Optimize supply chain processes by predicting disruptions and optimizing delivery routes. | Azure Machine Learning, Azure AI Search | Optimizes supply chain operations through predictive modeling and data analysis. | 9 | 8 | Analyze complex data across the supply chain using its advanced models to predict disruptions and optimize logistics, thus ensuring more efficient and timely delivery of goods. |
| Customer Satisfaction Score | Chatbots and Virtual Assistants | Handle customer inquiries and provide support round-the-clock. | Azure OpenAI, Bot Service | Provides 24/7 customer service through interactive chatbots and virtual assistants. | 6 | 5 | Leverage its advanced natural language processing capabilities to create more responsive and contextually aware conversational agents, improving customer engagement and service quality. |
| Customer Engagement Rate | Visual Search | Allow customers to search for products using images. | Azure Machine Learning, Vision | Allows customers to search for products using images and visual data. | 7 | 7 | Apply its advanced image processing algorithms to analyze and interpret visual queries more accurately, enabling quicker and more precise product matches based on user-submitted images. |
| Cost Reduction in Inventory | Inventory Management | Track inventory levels in real-time and automate ordering processes. | Azure Machine Learning, Azure AI Search | Manages inventory levels using predictive analytics and data integration. | 8 | 6 | Utilize its advanced language models to analyze historical data and real-time inputs, predicting inventory needs more accurately and automating restocking processes. |
| Net Promoter Score | Customer Sentiment Analysis | Analyze customer feedback to gauge sentiment and inform strategies. | Azure Machine Learning, Azure OpenAI | Analyzes customer feedback to understand sentiment and improve products. | 5 | 5 | Use its sophisticated natural language processing capabilities to more deeply analyze customer feedback and social media data, providing nuanced insights into consumer emotions and preferences. |
| Store Layout Efficiency | In-Store Analytics | Use data from sensors and cameras to track customer movement and interactions. | Azure Machine Learning | Provides insights on customer behavior and store performance using data analytics. | 7 | 8 | Leverage advanced AI algorithms to analyze video and sensor data, providing detailed insights into customer behavior patterns and store operations, thereby optimizing layout and improving customer experiences. |
| Shrinkage Reduction | Loss Prevention Monitoring | Detect suspicious activities and prevent theft using real-time video analytics. | Azure Machine Learning, Vision | Monitors and prevents theft using real-time video analytics and AI. | 6 | 4 | Apply advanced AI models to analyze real-time surveillance footage, detecting unusual activities and potential thefts more effectively, thereby improving security and reducing shrinkage. |
| Email Open Rate | Email Marketing Personalization | Tailor email campaigns based on customer data and behavior. | Azure OpenAI | Personalizes email marketing campaigns based on customer preferences. | 6 | 3 | Leverage its advanced natural language processing to generate personalized email content that resonates with individual preferences and behaviors, significantly boosting engagement and conversion rates. |
| Product Discovery Time | Product Tagging and Categorization | Automate the tagging and categorization of products in e-commerce platforms. | Vision, Azure AI Search | Automatically tags and categorizes products using image recognition. | 5 | 4 | Utilize advanced language models to automatically analyze product images and descriptions, improving the accuracy and efficiency of tagging and categorizing inventory. |
| Sales Forecast Accuracy | Sales Forecasting | Predict future sales for better financial planning and marketing. | Azure Machine Learning | Predicts future sales trends to inform business decisions. | 6 | 5 | Employ its advanced language models to analyze historical sales data, market trends, and consumer behaviors, enabling more accurate and granular sales predictions. |
| Customer Retention Rate | Customer Journey Mapping | Map customer interactions across touchpoints to identify optimization opportunities. | Azure Machine Learning, Azure OpenAI | Maps customer journeys to understand behavior and improve experience. | 6 | 4 | Leverage its advanced language models to analyze customer interactions across multiple channels, providing deeper insights into customer behaviors and preferences, thus enabling more targeted and effective marketing strategies. |
| Shopping Cart Conversion Rate | Chatbot-Assisted Shopping | Assist customers in navigating e-commerce sites and finding products through chat interfaces. | Azure OpenAI, Bot Service | Assists customers with shopping via interactive chatbots. | 5 | 4 | Use its advanced natural language understanding to interpret and respond to customer queries more effectively, providing personalized assistance and product recommendations in real-time. |
| Resolution Rate | Automated Customer Support | Handle routine customer inquiries and issues automatically. | Azure OpenAI, Bot Service | Automates customer support to handle inquiries and provide information. | 5 | 4 | Employ its advanced language models in conjunction with RAG architecture to better understand and respond to complex customer inquiries, ensuring more accurate and contextually relevant support interactions. |
| Brand Sentiment Score | Social Media Sentiment Analysis | Analyze social media to gauge public sentiment towards brands and products. | Azure Machine Learning, Azure OpenAI | Analyzes social media to gauge customer sentiment and brand perception. | 4 | 4 | Utilize its sophisticated language models to analyze vast amounts of social media data, accurately identifying and categorizing public sentiment and emerging trends about products and brands. |
| Waste Reduction Rate | Expiry Date Management | Manage and monitor product expiry dates to reduce waste and markdowns. | Azure Machine Learning, Azure AI Search | Manages product expiry dates to reduce waste and optimize stock. | 5 | 3 | Utilize advanced language models to analyze product turnover rates and shelf life data, enabling more accurate management of stock levels and reduction of waste due to expired products. |
| Checkout Efficiency | Mobile Checkout Applications | Enable customers to scan items and checkout via mobile device, reducing queues. | Azure Machine Learning | Enables mobile checkout to streamline the purchase process for customers. | 6 | 5 | Leverage language models to streamline and personalize the checkout process, enabling voice-activated commands and natural language interactions that simplify purchases and improve customer experience. |