

## Chapter 2

# An Aid of Business Intelligence in Retailing Services and Experience Using Artificial Intelligence

**M. Parveen Roja**

*PSNA College of Engineering and Technology,  
India*

**Manoj Kuppam**

 <https://orcid.org/0009-0006-4696-5280>

*Medline Industries Inc., USA*

**Surendra Kumar Reddy Koduru**

*GILEAD Sciences, USA*


**Rameshwaran Byloppilly**

*City University, Ajman, UAE*

**Sunil Dutt Trivedi**

*FMS-WISDOM, India*

**S. Suman Rajest**

 <https://orcid.org/0000-0001-8315-3747>

*Dhaanish Ahmed College of Engineering, India*

### ABSTRACT

*The retail industry is facing a lot of changes and challenges with the transformation from brick-and-mortar retailing to omnichannel presence with the innovation of online digital and mobile commerce. That, too, the role of artificial intelligence in aiding business intelligence is indisputable. Artificial intelligence has a tremendous role in the transformation of the retail industry. Rather than a mere supplier of customer needs, they now focus on the seamless experience to their customers to retain their customers throughout their lifetime with attractive service, products, and promotion components customized with the help of artificial intelligence. These artificial intelligence tools and techniques help retailers in this aspect to provide convenience and better customer experience. This artificial intelligence enables retailers' success in the omnichannel marketing strategy with the increased usage of AI applications in consumer-based products.*

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## **INTRODUCTION**

Artificial intelligence (AI) is the machine interface in doing the human tasks supported by the computer, whereby the machine adopts human intelligence through the training and tests of human data through recognition, remembrance, learning, and discovery (Weber & Schütte, 2019). This artificial intelligence gains the augmentation potential to replace human activities in intellectual, industrial, and social applications (Dwivedi et al., 2021), minimizing human interventions for routine activities. Thereby, it supports human activities, reducing errors and increasing efficiency. The pace of artificial intelligence is staggering, with machine learning and autonomous decisions leading to innovations (Alayli, 2023). Artificial intelligence could be significant in manufacturing, supply chain, finance, logistics, healthcare, and retail (Dwivedi et al., 2021).

## **BUSINESS INTELLIGENCE**

Business intelligence (BI) refers to the techniques and procedures that comply with, store, and present the reports based on data analysis of the organization's activities (Ashraf, 2023). BI includes mining data, analyzing processes, benchmarking performance, and reporting analytics in dashboards of key performance areas, facilitating quicker decisions (Atasever, 2023a).

## **ARTIFICIAL INTELLIGENCE (AI) AND BUSINESS INTELLIGENCE (BI)**

Artificial intelligence enables the integration of data pooled from various online and internal sources of data (Atasever, 2023b). Thereby, artificial intelligence aids business intelligence by automating data extraction and analysis processes to predict trends and provide insights in the form of reports based on the artificial intelligence viewpoints symbolism, behaviorism, and connectionism (Zhang & Lu, 2021), which is facilitated by the industry 4.0 with the integration of man and machine through the internet so that the business organizations can immediately act upon and take decisions instantly. More importantly, artificial intelligence aids business intelligence in its precision marketing (Eulogio et al., 2023).

## **ARTIFICIAL INTELLIGENCE AND RETAIL INDUSTRY**

Digital transformation transfers, alters and converts retail data into actions for definite business outcomes (Geethanjali et al., 2023). Artificial intelligence, through its machine learning and deep learning, leads to innovations in the retail sector (Hussain & Alam, 2023). To serve the customers better and captivate and retain the customers in their fold, artificial intelligence offers fundamental support with unique, innovative ideas and suggestions to defy the competition (Janabayevich, 2023). Artificial Intelligence provides many solutions for innovation processes via deep and machine learning in the retailing industry (Kolachina et al., 2023). It creates excellence in consumer services, with faster market expansion and a huge volume of sales turnover through its creative and intelligent recommendations (Lavanya et al., 2023). Artificial intelligence capabilities support the retail industries in providing personalized and effective experiences for clients through huge data analysis and customized product recommendations

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