

## Chapter 13

# Artificial Intelligence in Retail: Enhancing Customer Experience and Profitability

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### ABSTRACT

*This chapter gives an overview of how artificial intelligence is used by the retail sector to enhance customer experience and to improve profitability. It provides information about the role of the pandemic in stimulating AI adoption by retailers. It deliberates on how AI tools help retailers to engage customers online and in stores. Firms gain better understanding of customers, design immersive experiences, and enhance customer lifetime value using cost-effective technology solutions. It discusses popular AI algorithms like recommendation algorithm, association algorithm, classification algorithm, and predictive algorithm. Popular applications in retail include chatbots, visual search, voice search engine optimisation, in-store assistance, and virtual fitting rooms.*

### INTRODUCTION

Artificial Intelligence is gradually replacing traditional data analysis in data driven

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retail sector. This fact is envisaged in number of deals signed by AI start-ups. Between 2013-2018, 374 deals amounting to 1.8 Billion Dollars were finalised (*Artificial Intelligence for Retail in 2020: 12 Real-World Use Cases*, n.d.). The number of retailers deploying AI has gone up from 4% in 2016 to 28% in 2020 marking a sevenfold increase (*Artificial Intelligence for Retail in 2020: 12 Real-World Use Cases*, n.d.).

Artificial intelligence makes understanding of customers possible and these insights, combined with human intelligence can lead to significant changes in customer experience. For example AI can help a retailer analyse feed from the in-store cameras, locate customers in frames, track each customer's position, match it to location of product, and also signal sales staff whether a customer is standing for too long and may require assistance. The insights provided by such system can be integrated with CRM to predict demand for a particular product, create personalised promotional offers and customise pricing strategies to align with different customer groups.

Retail organisation who aggressively adopted AI showed revenue increase through applications of AI in multiple operational areas. Revenue increases from sales and marketing are reported when AI is used in pricing, predicting buying preferences and customer service analytics (Cam et al., 2019).

This chapter will attempt to provide answers to following questions:

1. How pandemic acted as a helped in adoption of AI tools?
2. How Artificial Intelligence can help in improving customer experience?
3. How can Artificial intelligence enhance retail profitability?
4. Which technology tools and algorithms are commonly used in a retail organisation?
5. What are the popular AI tools used by retail sector?

## **PANDEMIC AS A CATALYST FOR AI**

During pandemic customers were forced to shop online resulting in unprecedented growth rate of e-commerce revenue. In 2020, e-commerce sales grew by 20% and brick & mortar sales dropped by 14% (*Shopping in 2020: 6 Intriguing Experiments in Digital Retail*, n.d.). The amount of sales revenue lost can not be compensated with growth of e-commerce. Therefore, retail brands are under tremendous pressure to entice customers and provide them seamless and memorable experience. Customer interfacing technologies and back end technologies became harbinger of sweeping changes in retail. Covid 19 proved a catalyst for Artificial Intelligence in customer interface, sales, marketing, and logistics as retailers were forced to find different ways to engage and entice customers. Mobile apps, online shopping, digital payments,

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