



---

## THE ROLE OF AI IN ENHANCING CUSTOMER EXPERIENCE IN E-COMMERCE PLATFORM

**DR. VIDYA SANJAY JADHAV**

Sangola Mahavidyalaya, Sangola,  
Punyashlok Ahilyadevi Holkar Solapur University, Solapur.

### Abstract

This study explores the role of Artificial Intelligence (AI) in enhancing customer experience in e-commerce platforms. A mixed-methods approach was used, combining both qualitative and quantitative data collection and analysis methods. The findings highlight the significant impact of AI on customer experience, including improved personalization, enhanced customer support, and increased efficiency.

**Keywords** - Artificial Intelligence, Customer Experience, E-commerce, Personalization, Customer Support.

### Introduction

The rise of e-commerce has transformed the way businesses interact with customers. With the increasing use of digital technologies, customers expect personalized and seamless experiences. Artificial Intelligence (AI) has emerged as a key technology in enhancing customer experience in e-commerce platforms.

### Review of Literature

The literature on AI and customer experience highlights the potential benefits of AI in improving personalization, customer support, and efficiency. Studies have shown that AI-powered chatbots can provide 24/7 customer support, while AI-driven recommendation engines can offer personalized product suggestions.

### Research Methodology

The study employed a mixed-methods approach, combining both qualitative and quantitative data collection and analysis methods. The research design consisted of a survey, interviews, and a case study. The survey was administered to 500 customers, while the interviews were conducted with 20 e-commerce executives. The case study examined the AI-powered customer experience strategies of a leading e-commerce platform.

### Significance

The study contributes to the existing literature on AI and customer experience by providing insights into the role of AI in enhancing customer experience in e-commerce platforms.



---

## Scope

The scope of the study is limited to the examination of the role of AI in enhancing customer experience in e-commerce platforms.

## Objectives

The primary objectives of the study are:

1. To examine the impact of AI on customer experience in e-commerce platforms.
2. To investigate the role of AI in improving personalization in e-commerce platforms.
3. To analyze the impact of AI on customer support in e-commerce platforms.

## Hypotheses

The study tested the following hypotheses:

1. AI has a positive impact on customer experience in e-commerce platforms.
2. AI improves personalization in e-commerce platforms.
3. AI enhances customer support in e-commerce platforms.

## Research Design

The research design consisted of a survey, interviews, and a case study.

## Research Sample

The research sample consisted of 500 customers and 20 e-commerce executives.

## Limitations

The study has several limitations, including:

1. The study relied on self-reported data from customers and e-commerce executives, which may be subject to biases.
2. The study focused on the role of AI in enhancing customer experience in e-commerce platforms and did not examine other factors that may influence customer experience.

## Findings

The study found that:

1. AI has a positive impact on customer experience in e-commerce platforms.
2. AI improves personalization in e-commerce platforms.
3. AI enhances customer support in e-commerce platforms.

## References

1. L. T. Khrais, M. Zorgui, and H. M. Aboalsamh, "Harvesting the digital green: A deeper look at the sustainable revolution brought by next-generation IoT in E-Commerce," *Periodicals of Engineering and Natural Sciences*, vol. 11, no. 6, pp. 5-13, 2023.
2. A. Telikani, A. Tahmassebi, W. Banzhaf, and A. H. Gandomi, "Evolutionary machine learning: A survey," *ACM Computing Surveys (CSUR)*, vol. 54, no. 8, pp. 1-35, 2021.



- 
3. F. Tahir and M. Khan, "Big Data: the Fuel for Machine Learning and AI Advancement," EasyChair, 2516-2314, 2023.
  4. L. T. Khrais and A. M. Alghamdi, "The role of mobile application acceptance in shaping ecustomer service," Future Internet, vol. 13, no. 3, p. 77, 2021.
  5. M. Schroeder and S. Lodemann, "A systematic investigation of the integration of machine learning into supply chain risk management," Logistics, vol. 5, no. 3, p. 62, 2021.
  6. R. S. Michalski, "Learnable evolution model: Evolutionary processes guided by machine learning," Machine learning, vol. 38, pp. 9-40, 2000.
  7. M. Khan, "Ethics of Assessment in Higher Education—an Analysis of AI and Contemporary Teaching," EasyChair, 2516-2314, 2023.
  8. Q. Cheng, Y. Gong, Y. Qin, X. Ao, and Z. Li, "Secure Digital Asset Transactions: Integrating Distributed Ledger Technology with Safe AI Mechanisms," Academic Journal of Science and Technology, vol. 9, no. 3, pp. 156-161, 2024.
  9. J. Baranda et al., "On the Integration of AI/ML-based scaling operations in the 5Growth platform," in 2020 IEEE Conference on Network Function Virtualization and Software Defined Networks (NFV-SDN), 2020: IEEE, pp. 105-109.