



The impact of artificial intelligence on consumer purchase decisions in online shopping platforms: A study in Palakkad

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Abstract

Artificial Intelligence (AI) has transformed the online retail industry by enhancing customer experience, improving personalization, and influencing consumer purchase decisions. E-commerce platforms increasingly adopt AI technologies such as recommendation systems, chatbots, personalized advertisements, and voice assistants to improve service efficiency and consumer satisfaction. This study aims to identify the different AI technologies used in online shopping platforms and analyze how these technologies influence consumer purchase decisions in Palakkad. A quantitative research approach was adopted using a structured questionnaire. Data were collected from 150 respondents through convenience sampling. The results indicate that product recommendation systems and chatbots are among the most widely recognized AI technologies used in online shopping platforms. The study also reveals that AI significantly influences consumer purchase decisions by providing personalized product suggestions and improving customer interaction. The findings highlight the growing importance of AI in shaping consumer behavior in the digital marketplace.

Keywords: Artificial Intelligence, Online Shopping, Consumer Behaviour, E-commerce Personalization

Introduction

The rapid advancement of digital technologies has significantly transformed the retail industry, particularly through the emergence of e-commerce platforms. Online shopping has become increasingly popular due to convenience, product variety, and competitive pricing. In recent years, Artificial Intelligence (AI) has played a major role in improving the efficiency and effectiveness of online retail services.

AI technologies enable e-commerce platforms to analyze large volumes of consumer data and provide personalized shopping experiences. Features such as recommendation systems, chatbots, personalized advertisements, and voice assistants help businesses understand customer preferences and improve customer engagement. Popular platforms such as Amazon and Flipkart extensively use AI technologies to recommend products and enhance the online shopping experience.

These AI-driven features not only improve customer satisfaction but also influence consumer purchase decisions. Personalized recommendations and targeted advertisements encourage customers to explore products that match their interests. Therefore, understanding the role of AI in shaping consumer behaviour is important for both businesses and researchers.

This study aims to examine the AI technologies used in online shopping platforms and analyze their influence on consumer purchase decisions in Palakkad.

Objectives of the study

- To identify the different AI technologies used in online shopping platforms.
- To analyze how AI influences consumer purchase decisions in Palakkad.

Research methodology

Research Design

The study adopts a descriptive research design to examine the role of AI technologies in online shopping platforms.

Research Approach

A quantitative research approach was used to collect and analyze data.

Data Collection Method

Primary data were collected through structured questionnaires distributed among consumers who regularly use online shopping platforms.

Sampling Technique

The study used the convenience sampling method.

Sample Size

A total of 150 respondents from Palakkad participated in the survey.

Data analysis and interpretation

Table 1: AI Technologies Used in Online Shopping Platforms

AI Technology	No. of Respondents	Percentage (%)
Product Recommendation Systems	50	33.3%
Chatbots / Virtual Assistants	35	23.3%
Personalized Advertising	30	20%
Voice Search Assistants	20	13.3%
Image Recognition / Visual Search	15	10%
Total	150	100%

The table indicates that 33.3% of respondents identified product recommendation systems as the most commonly

used AI technology in online shopping platforms. Around 23.3% recognized chatbots or virtual assistants, while 20% mentioned personalized advertisements. Additionally, 13.3% of respondents used voice search assistants, and 10% were aware of image recognition or visual search technologies used in online shopping platforms.

Table 2: Influence of AI on Consumer Purchase Decisions

Level of Influence	No. of Respondents	Percentage (%)
Highly Influenced	55	36.7%
Moderately Influenced	60	40%
Slightly Influenced	20	13.3%
Not Influenced	15	10%
Total	150	100%

The table shows that 40% of respondents are moderately influenced by AI technologies when making online purchase decisions, while 36.7% reported a high level of influence. About 13.3% indicated slight influence, and 10% stated that AI technologies do not influence their purchase decisions.

Findings

- Product recommendation systems are the most widely recognized AI technology used in online shopping platforms.
- Chatbots and virtual assistants improve customer interaction and provide instant support during online shopping.
- AI technologies significantly influence consumer purchase decisions through personalized product recommendations and targeted advertisements.
- A majority of consumers in Palakkad are either highly or moderately influenced by AI-driven features when making online purchase decisions.

Suggestions

- Online shopping platforms should further enhance AI-based recommendation systems to provide more accurate product suggestions.
- Companies should improve AI chatbots and virtual assistants to deliver efficient and quick customer support.
- Businesses should ensure data privacy and transparency when using AI technologies to collect and analyze customer data.
- E-commerce companies should adopt advanced AI technologies such as visual search and voice assistants to improve the customer experience.

Conclusion

Artificial Intelligence has become an essential component of modern e-commerce platforms. AI technologies such as recommendation systems, chatbots, personalized advertisements, and voice assistants significantly enhance the online shopping experience. The findings of this study indicate that AI plays a major role in influencing consumer purchase decisions in Palakkad. As AI technologies continue to evolve, their impact on consumer behaviour and online retail strategies will become even more significant. Therefore, businesses must effectively integrate AI technologies to improve customer satisfaction, increase sales, and maintain competitiveness in the digital marketplace.

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