

## Impact of Generative AI on Consumer Purchase Decisions in E-Commerce

### Platforms at Myntra and Ajio

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### Abstract

Generative Artificial Intelligence (Generative AI) has emerged as a transformative technology in the e-commerce industry by revolutionizing the way businesses interact with consumers and deliver personalized shopping experiences. Modern e-commerce platforms increasingly utilize Generative AI to generate personalized product recommendations, intelligent virtual shopping assistants, AI-powered chatbots, automated product descriptions, visual search, personalized advertisements, and content generation to improve customer engagement and purchasing decisions. In India, leading fashion e-commerce platforms such as Myntra and AJIO have adopted advanced artificial intelligence technologies to enhance customer experience, improve recommendation accuracy, and increase online sales. These AI-driven innovations help consumers discover relevant products more efficiently while enabling businesses to understand customer preferences through predictive analytics and behavioral data analysis. The primary objective of this study is to examine the impact of Generative AI on consumer purchase decisions in Myntra and AJIO by evaluating factors such as personalization, trust in AI recommendations, customer satisfaction, shopping convenience, purchase intention, and overall shopping experience. The study also analyzes how AI-powered marketing influences consumer behaviour and compares the effectiveness of Generative AI applications between the two platforms. A descriptive research design was adopted for the study. Primary information was obtained through structured responses from consumers, while secondary information was collected from peer-reviewed journals, books, company reports, industry publications, and authentic online databases. Percentage analysis and graphical techniques were used to present and interpret the findings. The results indicate that AI-powered recommendations, virtual assistants, personalized promotions, and intelligent product suggestions positively influence consumer purchase decisions by improving shopping convenience and reducing decision-making time. However, concerns regarding data privacy, algorithm transparency, excessive personalization, and trust in AI-generated recommendations remain important challenges. The study concludes that effective implementation of Generative AI significantly enhances customer satisfaction, strengthens brand loyalty, improves purchase intention, and provides a sustainable competitive advantage for e-commerce platforms such as Myntra and AJIO.

**Keywords:** Generative Artificial Intelligence, Consumer Purchase Decisions, E-Commerce, Myntra, AJIO, Personalized Recommendations, AI Chatbots.

### I. INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) has significantly transformed digital commerce by enabling businesses to provide intelligent, personalized, and interactive shopping experiences to consumers. Among the recent technological innovations, Generative Artificial Intelligence (Generative AI) has emerged as one of the most influential technologies, allowing e-commerce companies to create personalized product recommendations, AI-generated product descriptions, conversational shopping assistants, virtual stylists, automated customer support, and intelligent content generation that enhance customer engagement and purchasing behaviour [1]. The increasing adoption of smartphones, internet connectivity, cloud computing, and big data analytics has accelerated the integration of Generative AI into online retail platforms, enabling businesses to better understand customer preferences and deliver highly personalized shopping experiences [2]. Leading Indian fashion e-commerce platforms such as Myntra and AJIO have incorporated AI-driven recommendation systems, intelligent search algorithms, personalized homepages, visual search capabilities, chatbot assistance, and predictive analytics to improve customer satisfaction and optimize purchasing decisions [3]. These technologies analyze customer browsing history, previous purchases, demographic characteristics, and behavioural patterns to recommend products that closely match individual preferences, thereby increasing conversion rates and reducing product search time [4]. Generative AI also enables businesses to create customized marketing content, personalized promotional messages, product reviews, and dynamic advertisements that significantly improve customer engagement across digital platforms [5]. Furthermore, AI-powered virtual shopping assistants provide real-time support, answer customer queries, recommend fashion combinations, and assist consumers throughout the purchasing process, improving convenience and shopping efficiency [6]. Research indicates that personalized AI recommendations

positively influence consumer trust, purchase intention, perceived value, and overall shopping satisfaction by reducing information overload and simplifying decision-making [7]. In addition, Generative AI contributes to inventory optimization, demand forecasting, customer segmentation, fraud detection, and supply chain management, enabling e-commerce businesses to improve operational efficiency while delivering superior customer experiences [8]. Despite these advantages, several concerns remain regarding consumer privacy, algorithmic bias, transparency of AI-generated recommendations, ethical use of customer data, and excessive personalization that may influence consumer trust [9]. Consumers increasingly expect AI systems to provide accurate, transparent, secure, and unbiased recommendations while protecting their personal information and shopping preferences [10]. Consequently, organizations must balance technological innovation with responsible AI governance to maintain customer confidence and long-term loyalty [11]. In India's rapidly growing digital economy, increasing internet penetration, digital payment adoption, and expanding online fashion retail have created favorable conditions for widespread adoption of Generative AI across e-commerce platforms [12]. Myntra and AJIO continue to invest in artificial intelligence technologies to improve personalization, customer engagement, digital marketing effectiveness, and shopping convenience, thereby strengthening their competitive position in the online retail market [13]. Understanding the impact of Generative AI on consumer purchase decisions is therefore essential for businesses, marketers, and researchers seeking to evaluate its influence on customer behaviour, purchasing intention, satisfaction, and future technological innovation within the e-commerce industry [14], [15].

## Research Objectives

The primary objective of this study is to examine the impact of Generative Artificial Intelligence on consumer purchase decisions

in the e-commerce platforms Myntra and AJIO. The study aims to evaluate how AI-powered personalized recommendations, virtual shopping assistants, intelligent chatbots, AI-generated product descriptions, personalized advertisements, and predictive analytics influence consumer purchasing behaviour, customer satisfaction, and brand loyalty. It further seeks to compare the effectiveness of Generative AI applications between Myntra and AJIO, analyze consumer trust in AI-generated recommendations, identify the benefits and challenges associated with AI-powered shopping experiences, and provide recommendations for improving AI-driven customer engagement and business performance in the e-commerce sector.

### Research Methodology

The study adopts a descriptive research design to analyze the impact of Generative Artificial Intelligence on consumer purchase decisions in Myntra and AJIO. Both primary and secondary sources of information were utilized for the research. Primary data were collected using a structured survey from consumers who regularly shop on either platform, while secondary data were obtained from peer-reviewed journals, books, company reports, industry publications, conference proceedings, and authentic online databases related to artificial intelligence, digital marketing, and e-commerce. The collected information was analyzed using percentage analysis and presented through bar graphs and a line graph to facilitate meaningful interpretation. The study focused on variables such as AI-powered product recommendations, virtual shopping assistants, chatbot effectiveness, personalized marketing, customer satisfaction, purchase intention, trust in AI systems, and overall shopping experience. The findings were systematically interpreted to evaluate the influence of Generative AI on consumer decision-making and to provide practical recommendations for enhancing AI-enabled e-commerce strategies in Myntra and AJIO.

## II. REVIEW OF LITERATURE

**Punna Ajay Kumar and Prof. Indrakanti Sekhar (2024)** This study examined the implementation of Generative AI in Myntra through its AI-powered shopping assistant, MyFashionGPT. The research found that Generative AI enhances customer experience by providing personalized fashion recommendations, natural language-based product search, and intelligent shopping assistance. The findings indicate that AI-driven personalization significantly improves customer satisfaction, shopping convenience, and purchase intention while strengthening Myntra's competitive advantage in the Indian fashion e-commerce market.

**Camilla Eriksson, Jonas Colliander, and Co-authors (2024)** This research investigated how AI recommendation systems influence consumer purchase decisions in online retail. The study concluded that AI recommendation agents reduce product search effort and simplify purchasing decisions. However, excessive dependence on AI recommendations may reduce consumers' perceived control over their choices. The authors suggested that businesses should design transparent AI systems to improve trust and purchasing confidence.

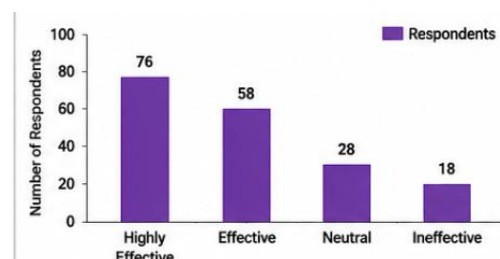
**Andreea Trifu and Co-authors (2024)** The study explored Generation Z consumers' perceptions of Artificial Intelligence in online shopping using the Technology Acceptance Model (TAM). Results showed that perceived usefulness, ease of use, and trust significantly influence AI adoption and purchase intention. AI-powered recommendations, chatbots, and personalized shopping experiences positively affected customer satisfaction and online buying behaviour.

**Om Jadhvani, Tiya Mohnia, Pranjali Suda, Rahul Chauhan, and Andino Maseleno (2024)** This study analyzed consumer buying behaviour on Myntra and identified pricing, promotional campaigns, product variety, website usability, and customer experience as major factors influencing purchase decisions. The research concluded that

personalized shopping experiences and digital innovations significantly improve customer satisfaction and repeat purchases.

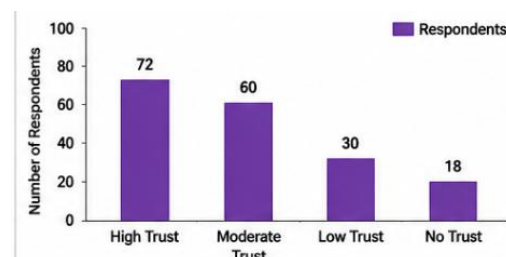
**Shrawan Kumar Trivedi, Pradipta Patra, Praveen Ranjan Srivastava, Justin Zuopeng Zhang, and Leven J. Zheng (2024)** The study applied machine learning techniques to predict online purchase intention. The researchers found that browsing behaviour, product recommendations, customer engagement, and personalized digital interactions significantly influence online purchase decisions. The study demonstrated that predictive analytics helps businesses improve marketing performance and customer conversion rates.

### III. DATA ANALYSIS & INTERPRETATION



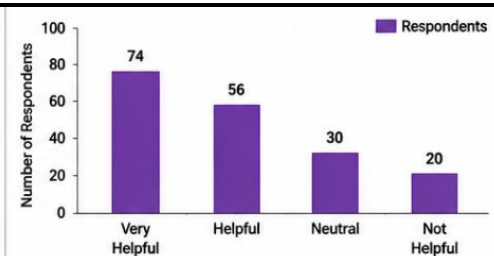
**Fig 1: Effectiveness of AI-Powered Personalized Recommendations**

Figure 1 The graph indicates that 42.2% of respondents believe AI-powered personalized recommendations are highly effective in assisting online shopping, while 32.2% consider them effective.



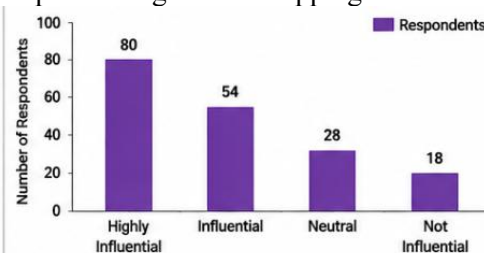
**Fig 2: Consumer Trust in AI-Based Product Recommendations**

Figure 2 The graph shows that 40.0% of respondents have high trust in AI-generated product recommendations, while 33.3% exhibit moderate trust.



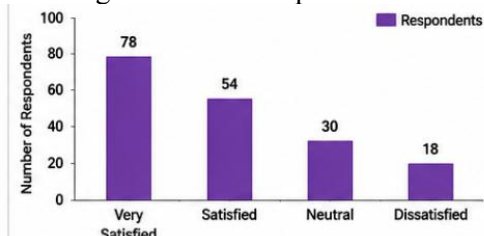
**Fig 3: Influence of AI Chatbots and Virtual Shopping Assistants**

Figure 3 The graph reveals that 72.2% of respondents consider AI chatbots and virtual shopping assistants either very helpful or helpful during online shopping.



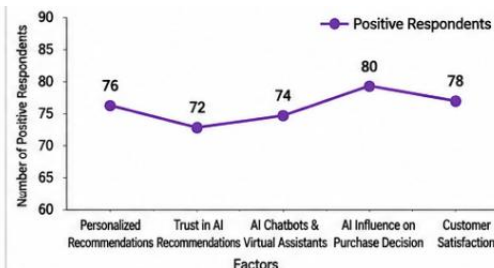
**Fig 4: Impact of Generative AI on Consumer Purchase Decisions**

Figure 4 The graph illustrates that 44.4% of respondents strongly believe Generative AI influences their purchase decisions, while 30.0% agree that it has a positive influence.



**Fig 5: Customer Satisfaction with Generative AI Features**

Figure 5 The graph indicates that 43.3% of respondents are very satisfied with Generative AI features, while 30.0% are satisfied.



**Fig 6: Overall Impact of Generative AI on Consumer Purchase Decisions**

Figure 6 The line graph presents the overall positive impact of Generative AI on consumer purchase decisions across five major dimensions.

#### IV. FINDINGS

The study reveals that Generative Artificial Intelligence (Generative AI) has a significant positive impact on consumer purchase decisions in the e-commerce platforms Myntra and AJIO. The majority of consumers reported that AI-powered personalized product recommendations help them discover relevant products quickly and simplify the shopping process. AI chatbots and virtual shopping assistants were found to enhance customer engagement by providing instant support, answering product-related queries, and offering personalized fashion suggestions. The findings also indicate that consumers generally trust AI-generated recommendations, although concerns regarding data privacy, algorithm transparency, and excessive personalization still exist. AI-powered search features, intelligent product descriptions, and customized promotional messages positively influence purchase intention and improve the overall online shopping experience. Furthermore, consumers expressed high satisfaction with AI-enabled features because they reduce product search time, improve decision-making, and increase shopping convenience. The comparative analysis suggests that both Myntra and AJIO effectively utilize Generative AI to strengthen customer relationships and improve digital shopping experiences, with Myntra demonstrating slightly higher consumer preference due to its advanced personalization capabilities and AI-driven fashion recommendations. Overall, the study concludes that Generative AI significantly enhances customer satisfaction, purchase intention, brand loyalty, and consumer confidence, making it a key driver of competitive advantage in the modern e-commerce industry.

#### V. CONCLUSION

The study concludes that Generative Artificial Intelligence has become a transformative technology in the e-commerce industry by significantly influencing consumer purchase decisions on platforms such as Myntra and AJIO. AI-powered features including personalized product recommendations, intelligent chatbots, virtual shopping assistants, AI-generated product descriptions, and predictive analytics have enhanced customer engagement, simplified product discovery, and improved overall shopping experiences. The findings indicate that consumers are increasingly willing to rely on AI-generated recommendations because they save time, provide relevant product suggestions, and improve purchasing confidence. Among the two platforms, Myntra demonstrates a slightly stronger impact due to its advanced AI-driven personalization and fashion recommendation capabilities. However, issues related to data privacy, transparency, algorithmic bias, and consumer trust remain important challenges that require continuous attention. Therefore, both Myntra and AJIO should continue investing in responsible AI technologies, ethical data practices, and customer-centric innovations to strengthen consumer trust, improve customer satisfaction, increase purchase intention, and maintain long-term competitiveness in the rapidly evolving e-commerce industry.

#### VI. FUTURE SCOPE

The future scope of this study lies in exploring the application of advanced Generative AI technologies such as autonomous AI shopping assistants, multimodal AI, augmented reality (AR), virtual reality (VR), voice commerce, and AI-powered virtual fashion stylists in enhancing online shopping experiences. Future research may compare the effectiveness of Generative AI across multiple e-commerce platforms such as Amazon, Flipkart, Nykaa, Tata CLiQ, Myntra, and AJIO to identify best industry practices. Researchers may also examine the influence of AI-generated content, personalized video advertisements, predictive customer analytics, and real-time

recommendation systems on consumer purchase behaviour across different demographic groups and geographical regions. Further studies can investigate ethical issues including algorithmic fairness, consumer privacy, data security, transparency, and regulatory compliance to promote responsible AI adoption in digital commerce. Additionally, future research may evaluate the long-term impact of Generative AI on customer loyalty, brand trust, business profitability, and sustainable competitive advantage, enabling e-commerce organizations to develop more intelligent, transparent, and customer-focused AI strategies.

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