

A STUDY ON AI - POWDERED VIRTUAL SHOPPING ASSISTANTS AND CONSUMER ENGAGEMENT: A SPECIAL REFERENCE TO MYNTRA APP

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DOI: <https://doi.org/10.34293/ICAICM-25.ch014>

Abstract

In the rapid evolution of online shopping, artificial intelligence (AI) has played a significant role in improving customer experience and driving expansion. Myntra is a well-known online retailer in India that has been using AI to maintain its dominant position in the e-commerce industry. This study explores Myntra use of AI tools such as chatbots, machine learning, product recommendations, voice assistance, and visual discovery to deliver great product experiences and adjusts accordingly. As the retail industry undergoes significant changes due to digital transformation, the role of artificial intelligence in the form of virtual shopping assistants is becoming increasingly essential for delivering customized shopping experiences. This research investigates the influence of Myntra's AI-enhanced functionalities, including personalized product suggestions, style consultations, and automated customer service, on consumer behavior, satisfaction levels, and brand loyalty. The results indicate that the implementation of AI markedly enhances user engagement by providing personalized experiences, which subsequently leads to increased conversion rates and sustained customer loyalty. This paper adds to the discourse on how AI can revolutionize consumer engagement strategies within the fast-changing e-commerce environment.

Keywords: AI powered, virtual shopping assistant, Myntra etc.

Introduction

This study explores the role of AI-enabled virtual store services in customer development by focusing on the Myntra app. It examines how AI-enabled features such as personalized recommendations, virtual experiments, and chatbots impact user behavior and satisfaction. Integration of virtual assistants into our virtual store ultimately drives business success by enabling 24/7 communication, business efficiency, and increased customer engagement. Online shopping is rapidly becoming more prevalent and has seen significant changes in online shopping in recent times. This growth has resulted in retailers of all sizes embracing technology and artificial intelligence (AI). Human-computer interaction (HCI) has become a staple of retail technology, becoming a key connection between consumers and the products they buy. AI and its related technologies are changing business and improving

the customer experience. Key findings driving adoption include efficiency, perceived usefulness, ease of use, entertainment value, social impact, peers, emotional intelligence, socialization, privacy concerns, perceived risk, behavior, and relationships. This study also contributes to academic and practical knowledge in the field of AI and digital marketing while addressing ethical and privacy concerns associated with AI applications. Ultimately, this highlights the potential of AI to revolutionize consumer interactions in the competitive e-commerce environment.

Utilizing a mixed-methods approach that encompasses both qualitative and quantitative data, such as user surveys and engagement metrics, the study assesses the effects of these technological advancements on consumer interactions and decision-making processes.

Objective

1. To identify the demographic factor of the respondents.
2. To Analyze how Ai-powered tools make shopping on Myntra faster and easier to decision making.

Need of Study

The rapid adoption of AI in e-commerce has transformed how consumers interact with online platforms, making it essential to understand its impact on consumer engagement. Myntra's AI-powered tools, such as personalized recommendations and chatbots, streamline decision-making, enhance user satisfaction, and build customer loyalty. This study explores the role of AI in delivering efficient and tailored shopping experiences, addressing the growing demand for seamless and intuitive digital services. Additionally, it highlights the importance of ethical considerations and privacy concerns associated with AI use. By analyzing these aspects, the research provides valuable insights for businesses to leverage AI effectively in a competitive e-commerce environment.

Review of Literature

1. **Pranav Desai, Krutrth Ganatra, (2022) "Artificial Intelligence In Strengthening The Operations Of E-commerce Based Business"** Disruptive technologies similar as the internet of effects, big data analytics, block chain, and artificial intelligence have changed the ways businesses operate.
2. **Shah Asif Mohd Saleem, Shaikh Mohammad Bilal Naseem (2023) "A Case Study of MyntraTM Enhancing E-Commerce Retailing with Multiple AI Solutions"** study on the Myntra's journey showcase the power of AI in changing the face of online retail.
3. **Gayathri Ranjit, Suresh Subramoniam, K Jnaneswar (2024) "Evidences of AI powered Use Cases and Challenges in E-tailing from leading Indian E -tailers"** The paper highlights the usage and challenges of artificial intelligence in e-tailing, citing use cases from leading Indian e-tailers like Amazon and Flipkart.

Research Methodology

It is a analytical study where a sample for the entire population was chosen from Myntra users in the city of Madurai based on their age, gender, annual income, and a few other factors. A Convenience sampling method has been adopted to select the sample respondents. Interview Schedule was conducted among 50 Myntra users within Madurai city.

Table: 1 Demographic and socio-economic factors of Myntra user

S.No	Particular	Classification	Frequency	%
1	Gender	Male	31	62%
		Female	16	38%
		Others	0	0
		Total	50	100
2	Age	Below 18	3	6%
		18 to 24	11	26%
		24 to 40	26	52%
		Above 40	10	20%
		Total	50	100
3	Marital status	Married	33	66%
		Unmarried	17	34%
		Total	50	100
4	Occupations	Students	9	18%
		Government employee	14	28%
		Private employee	20	40%
		Other	7	14%
		Total	50	100
5	Education qualification	SSLC	4	8%
		HSC	4	8%
		UG	19	38%
		PG	14	28%
		Others	9	18%
		Total	50	100
6	Monthly income	Below 10,000	1	2%
		10,000 to 40,000	13	26%
		40,000 to 80,000	30	60%
		Above 80,000	6	12%
		Total	50	100

Source: Primary data

The sample is predominantly male (62%) and aged 24-40 (52%), a key demographic for purchasing decisions. A significant portion is married (66%), likely influencing household and health-related purchases. Most are employed (68%) and well-educated, with (38%) holding an undergraduate degree and (28%) having postgraduate qualifications. With (60%) earning between 40,000 and 80,000, they represent a middle-class group that values affordability, quality, and informed buying decisions.

Tablet: 2 Satisfaction with the AI-powered features on Myntra.

The responses on satisfaction of the customers based on using experience of Myntra has been collected on Likert's five point scale ranging from Strongly Agree to Strongly Disagree.

S.No	Particular	VS	S	N	DS	VDS	Total
1	Virtual try-on features	65	40	21	8	16	150
2	Personalized product recommendations	25	80	15	34	3	157
3	Smart filters (e.g., size, price, color)	15	48	93	8	0	164
4	Time-saving	15	80	12	40	3	150
5	Instant chatbot assistance	105	16	15	4	18	158

Source: primary data

This table 2 data reveals that Instant chatbot assistance received the highest satisfaction, with (105) respondents strongly agreeing, contributing significantly to the total weightage of (158). This indicates a high level of acceptance and effectiveness of this feature. virtual try-on features also performed well, with a total weightage of (150) and a majority of responses falling under "Strongly Agree" (65) and "Agree" (40), showing it is a valued feature. Personalized product recommendations, with a total weightage of (157), saw most respondents agreeing (80), but a notable portion disagreed (34), suggesting some dissatisfaction, possibly due to inaccurate suggestions. Smart filters feature has the highest total weightage (164), yet it shows a dominant neutral response (93), indicating that while the feature is functional, it may not fully meet user expectations or require better optimization. Similarly, time-saving features (total weightage 150) received mixed reactions, with a significant number of respondents agreeing (80), but a notable proportion disagreeing (40), hinting at perceived inefficiencies.

Tablet: 3 Frequently usage of Ai powered virtual assistant shopping in Myntra.

S. No	Particular		Frequently	Occasionally	Rarely	Never	Total
1	AR tools	Freq.	29	16	4	1	50
		%	58%	32%	8%	2%	100
2	Voice search / Assistant	Freq.	8	30	7	5	50
		%	16%	60%	14%	10%	100
3	Style suggestions	Freq.	8	24	16	2	50
		%	16%	48%	32%	4%	100
4	Skin analyzers	Freq.	8	26	13	3	50
		%	16%	52%	26%	6%	100
5	Lipstick finder	Freq.	11	20	11	8	50
		%	22%	40%	22%	16%	100

Source: Primary data

This table 3 data reveals that AR tools are the most frequently used feature, with (58%) of users engaging with them regularly, indicating high popularity. In contrast, voice search/assistant is used occasionally by (60%) of users, but only (16%) frequently. Style suggestions and skin analyzers show a similar trend, with occasional use at (48%) and (52%), but only (16%) using them frequently. The lipstick finder sees moderate usage, with (22%) frequent users and (40%) occasional users. Overall, AR tools are the most valued, while other features like voice search and style-related tools are utilized less frequently but still show significant engagement.

Tablet: 4 Factors influencing purchasing decision

The responses are collected on the basis of ranking method.

Particular	Points	Rank
Size fitting assistant	228	VI
Wide variety of product	251	III
Transparency of Ai tools in offering clear shopping options	241	V
Order tracking	243	IV
Real - time style recommendations	256	II
Quick decision making	262	I

Source: primary data

Quick Decision-Making (Rank I, 262 Points) This feature is the most valued by consumers, indicating a strong preference for tools that facilitate faster purchasing decisions.

Real-Time Style Recommendations (Rank II, 256 Points) Ranked second, this feature showcases the importance of personalized suggestions in improving the shopping experience. Wide Variety of Products (Rank III, 251 Points) Consumers value access to a diverse range of products, emphasizing the importance of inventory variety in retaining user engagement. Order Tracking (Rank IV, 243 Points) Timely updates on order status are moderately important, reflecting a need for reliability and transparency in post-purchase services. Transparency of AI Tools (Rank V, 241 Points) Clear shopping options and transparency are appreciated, although less prioritized than other features. This indicates trust in AI's decision-making abilities but a desire for clarity. Size Fitting Assistant (Rank VI, 228 Points). This feature is the least significant to consumers, suggesting that size-related concerns might already be addressed adequately or are less critical compared to other aspects.

Finding of the Study

- **Male Dominance in Myntra Usage:** The sample consists of 62% males, 32% females, and 6% others. This indicates that Myntra's user base in Madurai is predominantly male, with a smaller female representation.
- **Young Adults Lead Usage:** The majority of users are between 24-40 years (52%), followed by 18-24 years (26%). The age group 24-40 is a significant demographic for online shopping, especially for fashion-related purchases.
- **Middle-Income Group Preference:** A significant portion (40%) of the respondents are private employees, and (60%) of users have an income between ₹40,000 and ₹80,000, indicating a middle-class user base with a preference for affordability and quality.
- **Wide Occupational Reach:** A significant portion (40%) of the respondents are private employees, and (60%) of users have an income between ₹40,000 and ₹80,000, indicating a middle-class user base with a preference for affordability and quality.
- **High Engagement with AR and Chatbot Features:** AR tools and instant chatbot assistance are the most positively received features, with frequent use and high satisfaction levels. These features are likely crucial for Myntra's user experience and offer clear value in terms of engaging users and providing support.
- **Frequency of Feature Usage:** AR tools were the most frequently used feature (58% of users), showing high engagement. Other features like voice search (60% occasional use), style suggestions (48% occasional use), and skin analyzers (52% occasional use) had moderate adoption, while lipstick finder showed niche but dedicated usage.

Satisfaction with AI-powered Features

Instant Chatbot Assistance received the highest satisfaction, with 105 respondents strongly agreeing on its effectiveness, leading to a total weightage of 158. This reflects strong user approval for real-time support that enhances the customer experience.

Virtual Try-on Features were also well-received, with 65 respondents strongly agreeing and 40 agreeing, totaling a weightage of 150. Users appreciate the ability to visualize products before purchase, particularly in fashion.

Personalized Product Recommendations had a weightage of 157, with 80 agreeing and 25 strongly agreeing. However, 34 respondents disagreed, possibly due to suggestions being inaccurate or irrelevant. **Smart Filters** (size, price, color) received the highest weightage of 164, but a significant number of neutral responses (93), indicating the feature is functional but may not fully meet user expectations and could need optimization. Time-saving Features had a total weightage of 150, with 80 agreeing and 40 disagreeing, indicating mixed reactions. While many users value the time-saving aspect, some noted inefficiencies such as delays or lack of precision.

- **Factors influencing purchasing decision:** The study identifies quick decision-making tools (202 points) as the most valued feature, emphasizing their role in simplifying shopping. Size fitting assistants (184 points) rank second, highlighting the need for accurate personalization. Wide product variety (181 points) is highly appreciated, showcasing its importance in meeting diverse consumer needs. Real-time style recommendations (176 points) reflect a demand for engaging, personalized experiences. Order tracking (159 points) is moderately valued, while transparency of AI tools (151 points) ranks lowest, indicating that users prioritize functionality and efficiency over understanding AI operations.
- Customers are generally satisfied with the AI-powered features on Myntra, particularly chatbot assistance and virtual try-on tools, which enhance the user experience.
- Usage patterns show AR tools as the most popular feature, while others like voice search and style suggestions are less frequently used but still valuable. Speed, convenience, and personalized recommendations significantly influence purchasing decisions, while features addressing transparency and size fitting are relatively less impactful.

Suggestions of the Study

1. **Enhance Personalized Product Recommendations:** Despite receiving positive feedback from most respondents, there was notable dissatisfaction regarding the accuracy of product suggestions.
2. **Optimize Smart Filters:** While smart filters had the highest total weightage, a significant portion of users gave neutral responses. Myntra could refine the smart filter functionality by making it more intuitive and ensuring that it meets users' expectations in terms of ease of use and filtering accuracy.
3. **Improve Time-saving Features:** The mixed responses to time-saving features suggest that while some users found them useful, others perceived inefficiencies. Myntra should focus on improving the efficiency of these features by reducing load times, simplifying the process of finding products, and enhancing the overall user experience.

4. **Promote Underused Features (Voice Search, Style Suggestions, Skin Analyzers):** Features like voice search, style suggestions, and skin analyzers were used less frequently. Myntra could increase awareness of these features through in-app tutorials or promotions, and consider optimizing them to improve usability, making them more intuitive and appealing to users.
5. **Enhance AR Tool Functionality:** AR tools emerged as the most frequently used and valued feature. Myntra should continue to invest in enhancing the AR experience, possibly by expanding its use to more product categories or integrating features like virtual fitting rooms for clothes, to further elevate user engagement.
6. **Target Younger and Female Users:** Since the sample had a higher proportion of male users and those aged 24-40, Myntra could consider strategies to attract younger below 18 and female users. Targeted campaigns that highlight features like style suggestions, skin analyzers, and virtual try-ons could appeal more to these demographics.
7. **Increase Marital Status Segmentation:** Given that a significant portion of the respondents are married, Myntra could consider developing features tailored to family-oriented shopping, such as personalized recommendations for household goods or family-specific promotions.

Conclusion

This study on AI-powered virtual shopping assistants and consumer engagement, with a special focus on the Myntra app, highlights the transformative role of AI in enhancing the e-commerce experience. By integrating AI-driven features such as AR tools, chatbots, and personalized product recommendations, Myntra has successfully enhanced user engagement and satisfaction. Key findings indicate that features like instant chatbot assistance and AR tools are highly valued by users, driving frequent usage and positive feedback. However, features like voice search, style suggestions, and smart filters, though functional, require optimization to improve user adoption and satisfaction.

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