

AI's Magic Touch: How Smart Tech Transforms Shopper Habits Through Unforgettable Experiences

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The revolutionary impact of artificial intelligence (AI) on consumer shopping behaviours is examined in this study, with a focus on how AI-driven applications improve customer experiences and influence buying patterns. 397 participants—including regular internet consumers and users of AI-integrated retail platforms—were selected through a purposive sample technique. The study focusses on four major applications of AI: social media engagement, chatbots, predictive analytics, and personalised recommendations.

The findings show that while chatbots enhance customer service by answering problems quickly and effectively, personalised recommendations have a major influence on purchasing decisions by providing customised product recommendations. By using predictive analytics, companies may foresee customer wants and develop proactive marketing strategies that appeal to consumers. Additionally, via the creation of dynamic and customised brand experiences, AI-powered social media engagement cultivates stronger relationships with customers.

The results demonstrate how these technologies work together to redefine convenience in the shopping experience, increase customer satisfaction, and foster loyalty. For companies wishing to use AI into their operations to boost customer satisfaction and increase their competitiveness in the market, this study offers insightful information. Useful advice is provided on how to use AI technologies to satisfy changing customer demands and build enduring brand-consumer partnerships. This study adds to the expanding corpus of research on AI's critical role in contemporary retail and provides a road map for businesses looking to successfully utilise AI's potential.

Keywords: artificial intelligence, consumer behaviour, customer experience, chatbots, predictive analytics.

1. Introduction

In the rapidly changing retail industry, artificial intelligence (AI) is transforming how customers browse, engage with companies, and decide what to buy. At a cumulative annual growth rate (CAGR) of 22.8%, the worldwide AI in retail industry is expected to rise from its 2023 valuation of roughly \$7.3 billion to \$17.8 billion by 2030. Throughout the forecast period demonstrates how AI is revolutionising the retail industry by enabling highly customised, engaging, and effective experiences that alter consumer behaviour and expectations.

Artificial intelligence (AI)-powered tools like virtual assistants, recommendation engines, and augmented reality (AR) are being incorporated into both online and offline retail environments. For instance, 77% of retail executives mention higher customer satisfaction as a direct result of AI, and 80% of them say it improves the consumer experience. Functionalities such as visual search, product suggestions, and chatbot support make shopping easier and more pleasurable, while technologies like augmented reality (AR) let customers "try before they buy," bridging the gap between online and offline retail experiences. In addition to analysing AI's significant influence on consumer behaviour, this study investigates how its "magic touch" produces remarkable shopping experiences. By exploring the technology advancements and consumer psychology underlying these changes, the study seeks to provide light on AI's crucial role in determining retail's future.

2. REVIEW OF LITERATURE

The literature highlights the transformative role of artificial intelligence (AI) and predictive analytics in enhancing customer experience across various industries. Huang and Rust (2021) emphasize the ability of predictive models to analyze historical data, enabling proactive marketing strategies that improve customer satisfaction, reduce churn, and enhance operational efficiency. Similarly, Thanyawatpornkul (2024) and Dai and Liu (2024) underscore the impact of AI-powered tools, particularly in Thailand's retail sector, where predictive analytics and AI-CRM systems have been instrumental in improving customer retention rates by 20%. Supporting these findings, Sreedevi et al. (2024) detail how AI-driven product recommendation systems utilize predictive analytics to personalize consumer interactions, significantly boosting satisfaction and conversion rates. On a broader scale, Tussyadiah et al. (2020) demonstrate AI's potential to optimize social media content and foster engagement through personalized interactions, while Xu et al. (2020) highlight the importance of integrating chatbots with human support teams to create seamless customer experiences.

Expanding on personalization, Benjamin Maxim (2023) explores the capability of AI to deliver hyper-personalized, omnichannel experiences by leveraging vast datasets, though challenges related to data protection and balancing automation with human interaction remain. Vandanapu (2024) highlights similar advancements in financial services, where AI-driven personalization has enhanced client satisfaction and operational procedures despite ongoing concerns about data integration and security. The retail and e-commerce sectors also benefit significantly, as Anderson and Johnson (2024) and IEEE (2022) document the use of predictive analytics to provide tailored shopping experiences, dynamic pricing, and efficient inventory management, all of which amplify customer loyalty and operational effectiveness.

Meanwhile, studies such as Majid and Ali (2019) and Ayuni et al. (2019) delve into the emotional and cognitive aspects of consumer behavior, illustrating how predictive analytics align these dimensions with customer preferences to improve satisfaction, loyalty, and purchase intentions. Together, these findings underscore the transformative potential of AI and predictive analytics while also highlighting the need for further exploration into data privacy, integration challenges, and achieving a balance between automation and human touch in enhancing customer experience.

STATEMENT OF THE PROBLEM

The growing adoption of artificial intelligence (AI) applications has changed how organisations interact with customers, but the ramifications for customer behaviour remain unknown. Although AI promises improved decision-making, efficiency, and personalisation, its effects on consumer loyalty, contentment, and trust are complicated and frequently mediated by the calibre of the customer experience. Businesses looking to effectively use AI must comprehend this mediation role. By investigating how AI apps affect consumer behaviour and whether customer experience serves as a link between AI adoption and behavioural outcomes like purchase intention and brand loyalty, this study aims to close the gap in the literature.

RESEARCH GAP

Although AI is clearly changing the retail industry, less is known about how it will affect consumer behaviour and experiences more broadly. Applications like chatbots and personalised recommendations are frequently isolated in research, ignoring their combined impact on producing engaging purchasing experiences. Furthermore, although AI's effectiveness and personalisation are well established, nothing is known about how it affects long-term loyalty, trust, and emotional engagement. Studies that are now available mostly concentrate on international retail marketplaces and provide little understanding of regional or cultural variations in how customers use AI technologies. The potential of AI to transform a range of consumer behaviours is not fully understood because of these shortcomings. To fully realise AI's disruptive potential, these problems must be resolved. The goal of this study is to present a comprehensive, behaviourally informed view of how AI will change consumer behaviour and produce memorable customer experiences.

RESEARCH QUESTIONS

- What is the perception of customer towards AI-driven applications in online retail?
- What is the interconnection between customer awareness and customer perception of AI applications in online retail businesses?
- What are the direct effects of AI applications on customer experience in online retail businesses?
- How do customer experience mediates influence the relationship between AI applications and consumer behavior?

OBJECTIVES OF THE STUDY

- To study customer perception towards AI applications performed by online retail business.
- To check correlation between customer awareness and customer perception towards AI applications performed by online retail business.
- To analyse the direct and indirect connections among AI applications, customer experience and consumer behaviour.

HYPOTHESIS

- H_01 : There is no significant difference in customer perception of AI applications in online retail businesses with gender.
- H_02 : There is no significant correlation between customer awareness and customer perception of AI applications in online retail businesses.
- H_03 : Proposed model has not a good fit.

PROPOSED CONCEPTUAL MODEL

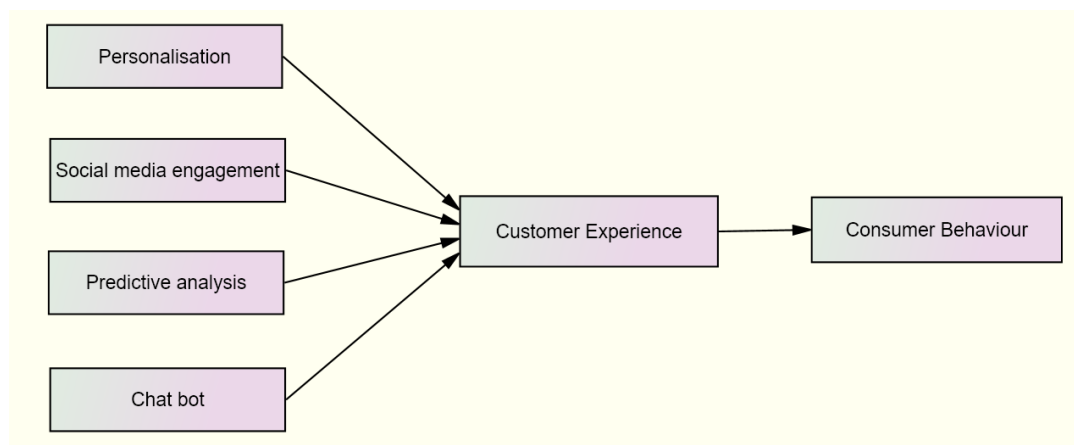


Figure 1

3. Research Methodology

The study adopts a descriptive research design to provide a thorough understanding of the interaction between AI applications, consumer experience, and behaviour. This method works well for documenting and evaluating how customers are now interacting with AI technologies in a variety of retail settings. Purposive sampling is used in the study to select participants who have actively engaged with AI apps in retail environments. These include customers who have made use of AI-powered chatbots, virtual try-ons, recommendation systems, and personalised shopping assistants. 397 respondents make up the study's sample size, which was selected to guarantee sufficient representation and statistical reliability. Google Forms will be used to administer a structured questionnaire in order to gather primary data.

Data Analysis

The data analysis for these objectives involves three distinct statistical approaches tailored to the research questions. Independent samples t-tests, correlation analysis, and structural equation modeling (SEM), are used to explore the relationships among key variables. Independent samples t-tests are used to compare mean differences between two distinct groups, providing insights into whether group-level differences are statistically significant. Correlation analysis examines the strength and direction of relationships between continuous variables, laying the groundwork for understanding potential associations. Finally, SEM is utilized to model complex relationships among multiple variables, testing both direct and indirect effects while accounting for measurement error. Together, these methods offer a robust framework to address our research questions and uncover nuanced patterns within the data.

Table 1: Reliability Analysis

Cronbach's Alpha	N of Items
.902	8

Interpretation

The reliability analysis shows a Cronbach's Alpha value of 0.902 for the 8 items. This indicates excellent internal consistency among the items, as Cronbach's Alpha values above 0.9 are generally considered to reflect high reliability. This suggests that the items used in the scale are measuring the same underlying construct effectively and can be considered reliable for further analysis.

Table 2: Independent Sample t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Perception	Equal variances assumed	.887	.347	-.579	395	.563	-.061	.105	-.267	.146
	Equal variances not assumed			-.590	298.751	.556	-.061	.103	-.263	.142

Source: Primary Data

Interpretation

Based on the results of the independent samples t-test, Levene's Test for Equality of Variances shows $F = 0.887$ and $p = 0.347$, indicating that the assumption of equal variances is met ($p > 0.05$). Using the row for "Equal variances assumed," the t-test yields $t = -0.579$, $df = 395$, and $p = 0.563$. The p-value exceeds the significance level of 0.05, meaning there is no statistically significant difference in customer perception of AI applications in online retail businesses based on gender. The mean difference is -0.061 , with a 95% confidence interval ranging from -0.267 to 0.146 .

which includes zero. These results support the null hypothesis, suggesting that gender does not significantly influence perceptions of AI in this context.

Table 3 Correlation Analysis

		Awareness	Perception
Awareness	Pearson Correlation	1	.891**
	Sig. (2-tailed)		.000
	N	397	397
Perception	Pearson Correlation	.891**	1
	Sig. (2-tailed)	.000	
	N	397	397

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data

Interpretation

The Pearson correlation analysis shows a strong positive relationship between awareness and perception, with a correlation coefficient of $r=0.891$, which is statistically significant at the $p<0.01$ level ($p=0.000$). This indicates that as awareness of AI applications in online retail businesses increases, perception of these applications also tends to improve, and vice versa. The high correlation suggests that awareness is a critical factor in shaping customer perceptions.

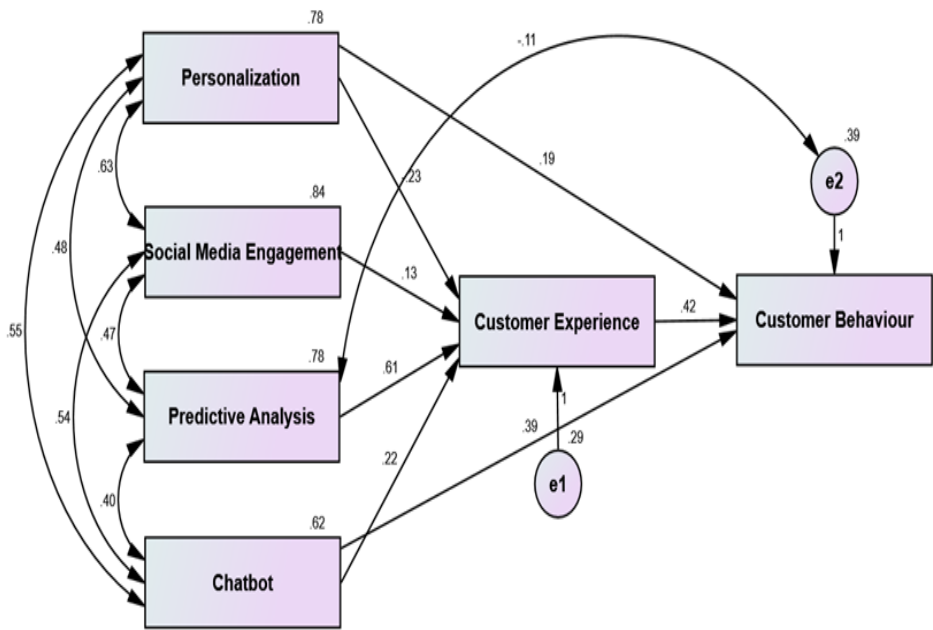


Figure 2: Structural Equation Modelling (SEM)

Table 4 Model Fit Measures

Measure	Estimate	Criteria	Interpretation
CMIN		-	-
DF		-	-
CMIN/DF	1.50	Between 1 and 3	Model Fit
CFI	1	>0.95	Model Fit
SRMR	0.004	<0.08	Model Fit
RMSEA	.035	<0.06	Model Fit
PClose	0.43	>0.05	Model Fit

Source: Primary Data

Interpretation

The model fit indices indicate an excellent fit for analysing the direct and indirect connections among AI applications, customer experience, and consumer behaviour. The CMIN/DF value of 1.50 falls within the acceptable range of 1 to 3, suggesting an appropriate balance between model complexity and data fit. The Comparative Fit Index (CFI) is 1, exceeding the threshold of 0.95, and the Standardized Root Mean Square Residual (SRMR) is 0.004, well below the cut-off of 0.08, both reflecting a well-fitting model. Similarly, the Root Mean Square Error of Approximation (RMSEA) value of 0.035, with a P Close of 0.43 ($>0.05 > 0.05 > 0.05$), further confirms the model's excellent fit. These results suggest that the proposed model effectively captures the relationships among AI applications, customer experience, and consumer behaviour, providing a solid foundation for understanding these dynamics.

4. Findings

The study highlights several key findings about customer perceptions and the role of AI applications in online retail businesses. Firstly, it was observed that gender does not significantly influence customer perceptions of AI applications, as indicated by the results of the independent samples t-test, which showed no statistically significant difference. Secondly, a strong positive correlation was identified between customer awareness and perception of AI applications, with a high Pearson correlation coefficient ($r=0.891$), emphasizing that increased awareness leads to more favourable perceptions. This underscores the critical role of customer awareness in shaping perceptions of AI. Lastly, the model fit indices provided robust evidence for understanding the direct and indirect relationships among AI applications, customer experience, and consumer behaviour. The excellent fit indices confirm that the proposed model effectively captures these dynamics. The results demonstrate that AI applications have a substantial influence on customer experience and behaviour, both directly and indirectly, offering valuable insights for online retailers to leverage AI technologies for enhancing customer satisfaction and driving positive consumer behaviour.

5. Suggestions

To positively impact consumer behavior, online retail businesses should focus on strategies that enhance customer awareness and optimize the implementation of AI applications. Since the study highlights a strong positive correlation between awareness and favorable perceptions of AI, retailers should invest in targeted educational campaigns, such as interactive content, tutorials, and AI-driven personalization showcases, to inform customers about the benefits and functionalities of AI in enhancing their shopping experience. Additionally, given the significant role of AI in shaping both direct and indirect connections to customer experience and behavior, businesses should ensure that their AI systems are seamlessly integrated into customer interactions, providing personalized recommendations, efficient query resolutions, and predictive analytics for a more engaging shopping journey. Retailers should also collect feedback to refine these AI applications continually, ensuring they address customer needs effectively. Moreover, since gender was not found to significantly influence perceptions, these strategies can be universally applied across diverse customer segments. By emphasizing transparency, reliability, and value in their AI-driven services, online retailers can build trust, enhance satisfaction, and drive favorable consumer behavior consistently.

Scope for future study

The scope for future research in this area is extensive, as the study lays a strong foundation for understanding the role of AI in shaping customer perceptions, experience, and behavior in online retail. Future studies can explore additional demographic factors such as age, education, income levels, or cultural influences to determine whether they play a significant role in shaping perceptions of AI applications. Moreover, researchers can delve deeper into the specific types of AI technologies (e.g., chatbots, recommendation systems, or predictive analytics) to assess their individual impacts on customer experience and behavior. Longitudinal studies could be conducted to evaluate changes in perceptions and behaviors over time as AI technologies evolve and as customers gain more exposure and familiarity. Additionally, future research could investigate the role of trust and ethical considerations, such as data privacy and algorithmic transparency, in influencing customer perceptions and acceptance of AI applications. Expanding the scope to include comparisons between online and offline retail environments, or across industries, can provide a broader perspective on how AI applications influence consumer behavior. These insights can further refine strategies for leveraging AI to meet customer expectations and drive positive outcomes in diverse contexts.

6. Conclusion

The study, "AI's Magic Touch: How Smart Tech Transforms Shopper Habits Through Unforgettable Experiences," provides valuable insights into the transformative impact of AI applications on customer perceptions, experiences, and behaviors in online retail. It highlights that gender does not significantly influence perceptions of AI, reaffirming the universal applicability of AI-driven strategies across diverse customer groups. The strong positive correlation between customer awareness and favorable perceptions underscores the critical importance of educating and engaging customers about the benefits of AI technologies. Furthermore, the study's robust model fit indices illustrate that AI applications play a pivotal

role in shaping both direct and indirect connections between customer experience and consumer behavior. These findings suggest that AI technologies, when effectively implemented and integrated, have the potential to revolutionize online retail by enhancing customer satisfaction, personalizing experiences, and fostering positive behavioral outcomes. As the landscape of retail continues to evolve, businesses must leverage AI's capabilities to stay ahead, ensuring that customers not only interact with smart technology but also derive meaningful value and enjoyment from their shopping experiences.

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