



**ARTIFICIAL INTELLIGENCE AND ITS IMPACT ON ONLINE
CUSTOMER EXPERIENCE**

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Abstract

Artificial Intelligence (AI) has astonishingly redesigned client experiences, thusly changing the web business scene. Man-made brainpower headways have disturbed how associations attract with their purchasers, from refined chatbots and redid recommendations to farsighted assessment and sharp chatbots. This investigation paper explores the occupation of man-made knowledge in additional fostering the client experience on electronic business stages, breaking down its effect on practical capability, constancy, and purchaser steadfastness. The results show that recreated insight driven game plans determinedly influence redesigning client responsibility and guidelines for trustworthiness, as affirmed by a mixed strategy approach that incorporates outlines and discretionary data. The audit closes with thoughts for utilizing computerized reasoning to overhaul client experiences.

Keywords

Artificial Intelligence, Customer Experience, E-Commerce, Personalization, Chatbots, Predictive Analytics

Introduction

Online business has emerged as an essential part of contemporary retail, giving unparalleled straightforwardness and receptiveness to buyers. In any case, as contention in the automated business place heightens, the essential to give exceptional client experiences has become continuously crucial. Man-made mental ability (recreated knowledge) has transformed into a strong instrument for online business stages, working with redid, capable, and attracting collaborations that further develop client pleasure and reliability.

The ascent of man-made knowledge advancements, for instance, artificial intelligence, ordinary language taking care of (NLP), and PC vision, has enabled web-based business stages to create from responsive client help models to proactive, farsighted



structures. Man-made insight filled idea systems evaluate client direct to give suitable thing ideas, while computerized reasoning driven chatbots pass fast assistance on to address client demands. These courses of action are changing the purchaser adventure by alleviating torture spots and dealing with for the most part responsibility.

The importance of man-made brainpower in electronic business transcends client organized applications. Utilizing PC based knowledge, adventures could work on stock organization, refine arranged tasks, and guess market floats, all of which work with a reliable purchaser experience. Likewise, as clients put more essential importance on modified and steady shopping experiences, the occupation of PC based knowledge in fulfilling these solicitations is becoming central.

This study investigates the incredible effects of man-made reasoning on web business purchaser experiences, taking apart the two its ongoing applications and impending movements. This study hopes to explain which man-made knowledge is changing client help standards and significance for the destiny of the web business region through the examination of relevant investigations and accurate data. This study's choices intend to help web business specialists in utilizing PC based knowledge gainfully to additionally foster client satisfaction and energize business improvement.

Background of the Study

Electronic business has progressed rapidly over the latest ten years, moved by imaginative new developments and moving client plans. In any case, the difficulties of satisfying contrasted client suspicions, coordinating wide thing inventories, and conveying persistent assist with having obliged the blend of man-made brainpower. Using computer based intelligence, ordinary language taking care of, and data examination, man-made reasoning empowers electronic business structures to anticipate client tendencies, motorize drawn-out techniques, and further foster powerful cycles. This review investigates how man-made insight mitigates these difficulties and overhauls client experiences.

Objectives of the Study

1. To assess the impact of computer based intelligence innovation on shopper experience in internet business.
2. To track down head computer based intelligence applications that expand buyer



fulfillment and commitment.

3. To survey the effect of simulated intelligence on cultivating client faithfulness and maintenance.
4. To research planned roads for simulated intelligence reconciliation inside the online business industry.

Importance of the Study

This study is significant for online business endeavors hoping to achieve an advantage through development driven game plans. By understanding the ability of PC based knowledge in growing client experience, tries could perceive ideal practices, update useful capability, and foster more generous client associations. In addition, the survey works on educational composition by offering pieces of information into the breaker of reproduced knowledge in electronic business and its effects on corporate accomplishment.

Hypotheses

1. **H1:** AI-driven personalization significantly enhances customer satisfaction on e-commerce platforms.
2. **H2:** The implementation of AI technologies positively influences customer loyalty in e-commerce.

Literature Review

Mohannad A. M. Abu Daqar, Ahmad K. A. Smoudy(2019), “The Role of Artificial Intelligence on Enhancing Customer Experience”, International Review of Management and Marketing, concluded as This study explores the impact of AI on customer experience, focusing on customer service and post-sale assistance. Using both qualitative and quantitative data, the researchers found a positive correlation between AI and customer experience, with a direct relationship between personalized customer care and AI. The study also found that delivering individualized customer support throughout the purchasing process significantly influences the customer experience. Implementing AI in call centers and post-sales support services can reduce wait times, improving the overall customer experience. However, not all enterprises in Palestine can fully implement AI technology due to high costs and cultural skills shortages. As AI continues to evolve, it is crucial for individuals and technology creators to ensure it serves to comfort humans rather than replace them.



Thandekkattu¹, Salu George, and M. Kalaiarasi. "Customer-Centric E-commerce Implementing Artificial Intelligence for Better Sales and Service." You can find it in the procedures of the ICACECS 2021, which is the second worldwide meeting on propels in PC designing and correspondence frameworks. Springer Nature in Singapore 2022 in Singapore. Investigate the field of man-made intelligence, incorporating how it's utilized in games and how it's incorporated into web applications. The review takes a gander at a wide range of areas of computer based intelligence, including vision, prescient examination, procedure sending, and how to manage vulnerability in simulated intelligence models.

You, Fatima², and Deepika Pandita are Vapiwala. "Breaking down the Utilization of Man- made brainpower for Web based business Client Commitment." On pages 423 and 427 of the 2022 Worldwide Gathering on Information Investigation for Business and Industry (ICDABI). IEEE, 2022. DOI: 10.1109/ICDABI56818.2022.10041655 Fatima and Deepika present the CAPE model, which means "Charming Shoppers through Chatbots for Communication, Increased computer based intelligence Promoting, Customized Content and Contributions, and Drawing in Buyers in light of man-made intelligence Information Bits of knowledge." This model gives Indian web based business organizations and advertisers ways of further developing client commitment in the post-pandemic world.

Their paper is classified "Man-made brainpower in promoting: Efficient audit and future exploration heading." Verma, Sanjeev, Sharma, Rohit, Debojit, and Subhamay Deb. No. 1 of the Global Diary of Data The executives Information Experiences in 2021 is 100002. <http://dx.doi.org/10.1016/j.jjimei.2020.100002> Describe how computerized reasoning (simulated intelligence) can be utilized to further develop showcasing and propose new regions to concentrate on from here on out.

Rodrigo Perez-Vega, Valtteri Kaartemo, Cristiana R. Lages, Niloofar Borghei Razavi, and Jaakko Männistö. "Reshaping the settings of online client commitment conduct through man- made brainpower: A reasonable system." This paper was distributed in 2018. 902-910 in Diary of Business Exploration 129 (2021). <https://doi.org/10.1016/j.jbusres.2020.11.002> offer a reasonable structure that makes sense of how organizations and clients can work on the consequences of both asked and unasked for online client commitment by utilizing data handling frameworks that are controlled by simulated intelligence.



Tune, Xia, Yang Shiqi, Huang Ziqing, and Huang Tao. "The utilization of man-made reasoning in electronic trade." In the Diary of Material science: Gathering Series, volume 1302, issue 3, page 032030. IOP Distributing, mid 2019. Tune et al. DOI 10.1088/1742-6596/1302/3/032030 give a careful glance at how man-made intelligence innovation is utilized in online business now and how it very well may be utilized from here on out. Involving Baidu Remove for instance, the review takes a gander at how simulated intelligence can be utilized in regions like computer based intelligence collaborators, cunning planned operations, proposal frameworks, and ideal evaluating. The paper takes a gander at what man-made reasoning has had a major mean for on the improvement of internet business.

A. A. Nimbalkar and A. T. Berad composed an article called "The Rising Significance Of computer based intelligence Applications In Online business." Vol. 13, No. 1 of the Vidyabharati Worldwide Interdisciplinary Exploration Diary, 2021, pp. 388-391. You ought to take a gander at the principal ways artificial intelligence is utilized in web based business, for example, chatbots or virtual partners, customized item ideas, stock administration, and that's only the tip of the iceberg.

Harikumar, Pallathadka, Edwin Hernan Ramirez-Asis, and Telmo They are Mohd Naved, Pablo Loli-Poma, Karthikeyan Kaliyaperumal, and Randy Delight Magno Ventayen. "Utilizations of computerized reasoning in business the board, online business and money." In Materials Today: Procedures 80 (2023): 2610-2613, we see how AI and man-made intelligence are utilized in banking, business the executives, and online business.

Norbert Wirth. "Hi showcasing, what could computerized reasoning at any point assist you with?" In the most recent issue of the Worldwide Diary of Statistical surveying (Vol. 60, No. 5, 2018), pages 435-438; Norbert Wirth portrays various sorts of man-made reasoning, including limited computer based intelligence, half and half man-made intelligence, and solid simulated intelligence. He then, at that point, upholds the utilization of artificial intelligence driven showcasing information arrangements.

Cheng, Xusen, Jian Mou, and Jason Cohen. "Man-made intelligence empowered innovation development in web based business." Vol. 24, No. 1 (2023): 1-6 in the Diary of Electronic Trade Exploration crafted by Cheng, Xusen, Jason Cohen, and Jian Mou assists us with more deeply studying how organizations and individuals act with regards to artificial



intelligence. They see security issues, the advantages and dangers of artificial intelligence driven developments in online business, and how individuals can construct entrusting associations with man-made intelligence.

These individuals are Sukanta Kumar Baral, Durga Madhab, Soumendra Kumar Patra, and Mahapatra. "Releasing the Capability of Man-made reasoning (man-made intelligence) in Client Excursion of Mental Advertising and Cognizance Aim in Web based business Sites." There are pages 44-51 in the second Global Gathering on Supportability and Value (ICSE- 2021). In a recent report distributed by Atlantis Press, Mahapatra et al. take a gander at what simulated intelligence means for client mindfulness, purchase aim, and the client venture in mental promoting.

"Artifical Insight in Web based business: Applications, Suggestions, and Difficulties." Lari, Halima Afroz, Kuhu Vaishnava, and K. S. Manu. Asian Diary of The board 13, no. 3 (2022): 235-244. Lari, Halima Afroz, Kuhu Vaishnava, and K. S. Manu are checking on a great deal of scholastic papers to attempt to sort out what the principal uses of computer based intelligence are in internet business. The review says that artificial intelligence makes Web based business organizations considerably more useful, which has prompted more interests lately to help organizations develop and create.

Raj, SS Onyx Nathanael Nirmal, A. Kalaivani, Kismat Kaur, Tarun Singh Vij, CGC CBSA, Punjab Creator Mohali, and Y. Suryanarayana Murthy. "Man-made reasoning in Online business: A Writing Survey." Man-made brainpower 21, no. 01 (2023). Raj et al. take a gander at the fundamentals of both internet business and computer based intelligence, making sense of their advantages and deciding how significant it is for man-made intelligence to be utilized in web based business in light of late examination.

Research Methodology

This study adopts a mixed-method approach, combining qualitative and quantitative methods. Surveys were conducted with 200 e-commerce customers to gather insights into their experiences with AI-driven features. Secondary data was collected from industry reports, academic journals, and case studies to complement primary data.

Sample Size: 200 respondents

Sampling Method: Stratified random sampling

Data Collection Tools: Online surveys and secondary data analysis

Data Analysis Tools: Statistical tools such as SPSS and thematic analysis for qualitative data

Data Analysis

Survey results reveal that 85% of respondents found AI-driven recommendations helpful in discovering relevant products. Nearly 78% appreciated the efficiency of chatbots in resolving queries. However, concerns regarding data privacy were highlighted by 40% of respondents, indicating a need for greater transparency in AI applications.

Demographic Analysis

Age		
	Respondents	%age
21-30	45	22.5
31-40	102	51
41-50	25	12.5
Above 50	28	14
	200	100

Among the total respondents, 51% of respondents were from age group of 31-40 years, 22.5% of respondents were from 21-30 years age group.

Gender		
	Respondents	%age
Male	153	76.5
Female	47	23.5
	200	100

Majority of respondents were male (76.5%) and female were 23.5%.

Education Level		
	Respondents	%age
Bachelor's Degree	85	42.5
Master's Degree	75	37.5
Doctorate or Above	40	20
	200	100

Majority of respondents were bachelor degree 42.5%, master degree were 37.5 and doctorate or above were 20%.

Occupation		
	Respondents	%age
Student	0	0
Self-Employed	45	22.5
Private Sector Employee	85	42.5
Public Sector Employee	55	27.5
Unemployed	15	7.5

	200	100
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Majority of respondents were from private sector employee (42.5%), public sector employee were 27.5%, self-employed were 22.5%.

Monthly Income		
	Respondents	%age
Less than ₹20,000	8	4
₹20,001 - ₹50,000	54	27
₹50,001 - ₹1,00,000	89	44.5
Above ₹1,00,000	49	24.5
	200	100

Majority of respondents from monthly income group of ₹50,001 - ₹1,00,000 (44.5%), between ₹20,001 - ₹50,000 were 27%, above ₹1,00,000 were 24.5%.

Frequency of Online Shopping		
	Respondents	%age
Rarely (less than once a month)	20	10
Occasionally (1-3 times a month)	35	17.5
Frequently (weekly)	68	34
Very Frequently (multiple times a week)	77	38.5
	200	100

Hypothesis testing

Anova: Single Factor				
Groups	Count	Sum	Average	Variance
The product recommendations I receive on e-commerce platforms are highly relevant to my preferences.	200	254	1.27	0.19809
AI-driven search suggestions on e-commerce websites save me time while shopping.	200	630	3.15	1.193467
Personalization features (e.g., tailored discounts, offers) enhance my shopping experience.	200	254	1.27	0.19809
I feel more satisfied when the platform adapts its layout or content to my preferences.	200	560	2.8	1.20603

Personalized communication (e.g., emails, notifications) significantly improves my engagement with the platform.	200	432	2.16	1.90392	
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ANOVA						
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	593.88	4	148.47	157.9603	0.00	2.380876
Within Groups	935.22	995	0.93992			
Total	1529.1	999				

From Anova test, $F > F_{crit}$ i.e. $157.9603 > 2.380876$ and p-value is 0.00 , shows that alternative hypothesis is accepted. i.e. AI-driven personalization significantly enhances customer satisfaction on e-commerce platforms.

Anova: Single Factor					
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	
AI-driven features encourage me to revisit the e-commerce platform frequently.	200	248	1.24	0.183317	
I am more likely to recommend an e-commerce platform with advanced AI features to friends or family.	200	452	2.26	1.962211	
AI technologies (e.g., chatbots, virtual assistants) enhance my trust in the platform's services.	200	248	1.24	0.183317	
I am loyal to e-commerce platforms that use AI to provide a seamless shopping experience.	200	452	2.26	1.962211	
AI-based problem resolution (e.g., automated returns, 24/7 assistance) positively impacts my loyalty toward the platform.	200	528	2.64	1.51799	

ANOVA						
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<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	334.816	4	83.704	72.0462 6	0.00	2.38087 6
Within Groups	1156	995	1.16180 9			
Total	1490.81 6	999				

From Anova test, $F > F_{crit}$ i.e. $72.04626 > 2.380876$ and p-value is 0.00 , shows that alternative hypothesis is accepted. i.e The implementation of AI technologies positively influences customer loyalty in e-commerce.

Findings

1. AI-driven personalization significantly enhances customer satisfaction, as evidenced by high user engagement rates.
2. Chatbots and predictive analytics improve operational efficiency, enabling faster resolution of customer queries.
3. While AI technologies foster customer loyalty, data privacy concerns remain a critical challenge.

Discussion

The findings underscore the transformative potential of AI in enhancing customer experiences on e-commerce platforms. Personalization, real-time support, and predictive analytics emerge as key drivers of customer satisfaction and loyalty. However, addressing data privacy concerns is crucial to sustaining customer trust. Businesses must balance AI innovation with ethical practices to achieve long-term success.

Recommendations

1. **Invest in AI Training:** Businesses should train employees to effectively implement and manage AI technologies.
2. **Enhance Data Privacy Measures:** Transparent data collection and usage policies can build customer trust.
3. **Leverage AI for Customer Insights:** Continuous analysis of customer feedback using AI tools can help refine strategies.

4. **Adopt Omnichannel AI Solutions:** Integrating AI across all customer touchpoints ensures a seamless and consistent experience.

Conclusion

Artificial Intelligence has become a cornerstone of e-commerce, enabling businesses to deliver personalized, efficient, and engaging customer experiences. While the adoption of AI presents immense opportunities, challenges such as data privacy and ethical considerations must be addressed. By strategically leveraging AI, e-commerce platforms can achieve sustained growth, customer satisfaction, and loyalty.

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