

# ROLE OF AI IN CUSTOMER RELATIONSHIP MANAGEMENT: A PERSPECTIVE FROM E- COMMERCE IN THE POST-COVID ERA



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## ABSTRACT

**Background:** In the post-pandemic environment, it is crucial to comprehend how consumer behavior has changed. Business continuity is impacted by e-commerce enterprises' capacity to comprehend these behavioral shifts. This paper attempts to provide a bridge between customer relationship management (CRM) and other variables such e-commerce. This bridge is specifically discussed in post-pandemic period. Customers are becoming more aware of e-commerce and using it to fulfill their demands. In an effort to manage customer happiness in the post-pandemic period, businesspeople are simultaneously anticipating this consumer behavior through strengthening CRM.

**Methodology:** The researcher has employed descriptive research method. Research has used quantitative in nature where the researchers have collected primary data from the customer relationship manager in the e-commerce company say Amazon. 45 Amazon employees were taken as sample.

**Results:** Artificial Intelligence plays a significant part in preserving customer relationships by offering dependable services and retaining customers for extended durations than normal. Customers are becoming more involved with the e-commerce industry following the pandemic for a variety of reasons. This includes its easy-to-use interface and ease of payment. The one click order of wide range of goods along with automated recommendations on the basis of searches is attracting consumers.



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## INTRODUCTION

According to the evolution of modern business theory and practice, CRM has become an essential component in guaranteeing corporate sustainability (Tran, L. T. T. 2021). Companies are getting better at managing CRM operations thanks to the change in consumer behavior brought on by COVID-19. Although clients may no longer readily do direct business transactions, this adjustment is made to keep customers (face-to-face). In the transition from offline to online business, the internet has played a key role in providing different channels on a single platform. CRM challenges are being improved and strengthened by the rapidly expanding internet industry and its extensive segmentation (Guthrie, C. et al., 2021).

The technological advancement made during the Industrial Revolution that has had one of the biggest influences on all sectors of work is Artificial Intelligence (AI). In order to satisfy its demands, modern technology has increased human productivity by a factor of two. A similar issue related to AI use has also occurred in the corporate sphere (Chatterjee, S. et al, 2021). AI may be used to manage customer support with an increasing range of demographic and geographic coverage. During the pandemic, it was natural to use AI-related facilities to handle operations by e-commerce companies. CRM may be enhanced when businesses use AI to process large customer-related data. This problem predominates in all nations (Khiong, K. 2022). This finding suggests that AI is one of the widespread technological innovations used by society for various purposes, such as business or retail services.

## AI-POWERED CRM

Businesses may track and analyze their interactions with clients, suppliers, and staff using a customer relationship management (CRM) system. Enhancing and preserving these commercial ties seeks to boost sales effectiveness and profitability (Mishra, N., & Mukherjee, S. 2019).



CRM systems may access customer interaction histories and sales statistics by gathering information about current and future customers. This makes it possible for CRM systems to recognize the necessary services and goods to enhance sales procedures. In general, the software helps businesses understand their clients better. Companies may enhance their user experience by:

1. Identify new sales prospects,
2. Improve support services,
3. Create more successful marketing plans.

A survey indicates that current customers provide 65% of a company's income. Five times as much money goes into keeping a happy customer as finding new ones. It is essential to fully comprehend them and take the necessary action to forge strong relationships with clients and increase sales KPIs (Chatterjee, S., & Chaudhuri, R. 2022). The primary justifications for using AI in CRM applications are as follows:

**1. Unstructured data may be transformed into structured data using AI techniques.**

Algorithms for machine learning may identify trends and provide vital business insights, ultimately being converted into structured information. For enterprises, AI technology offers scalable solutions. The growing number of data enables them to manage a larger volume of data more rapidly and with fewer mistakes (Galitsky, B. 2020).

**2. The increasing complexity of relationships**

The number of transactions also complicates company connections and procedures. This is done along with huge data expansion. Because of this intricacy makes comprehending business ties and examining client trends more complex (Bu, Y., Quach, S., & Thaichon, P. 2022).

## OBJECTIVES

1. To identify the areas of application of AI in customer relationship management
2. To identify the role of AI in CRM in E-Commerce in Post COVID era

## LITERATURE REVIEW

According to (Castillo, M. J., & Taherdoost, H. 2023), the COVID-19 pandemic has completely altered consumer behavior due to over-reliance on internet buying. Several companies were compelled to create innovative strategies to remain competitive and adapt to these swift changes. Due to the widespread pandemic, which caused people to stay at home, this was necessary. Nonetheless, the pandemic has also sped up the advancement of



technology like AI. The science of building intelligent machines and computer programs is known as AI. AI can make decisions on its own or supply individuals with data to aid in decision-making. The design of artificial intelligence software can take organizational requirements and performance goals into account. Although AI has many benefits for e-businesses, it is still a relatively new technology they may use to set themselves apart from their rivals. Companies have not realized the full potential of this technology if its deployment is not understood. Moreover, disagreements about the ethics of AI and privacy issues have sparked additional studies into how to make these systems more dependable and moral.

(Pavlova, V., et al. 2021) Investigate the global trends in e-commerce development. The researchers are examining the adjustment of e-share commerce's overall retail sales in reaction to the crisis. The nature of the e-commerce sector for businesses has changed due to the crisis. The main problems e-commerce companies ran across throughout the most recent financial crisis are described in the piece, along with remedies to those problems. Blockchain and other technical innovations, such as chatbots, have been noticed by the worldwide e-commerce business. The study also analyzes the significant changes brought on by the crisis in the growth of e-commerce. These trends attempt to attract the "hottest" visitors by setting up situations that swiftly or even automatically allay the user's concerns and queries surrounding the purchase of items in the online shop.

According to (Sriram, V. P. et al. 2021), CRM software with AI assistance might compensate for lost performance by guiding teams to the optimum choice. This will be accomplished by randomly selecting among thousands of potential future steps. The system is built on AI algorithms that continuously learn from sales funnel activity and individual actions. The time it generally takes to close a lead is also considered based on past trends. This information is swiftly analyzed to give salespeople precise guidance on whom to call, when, and what to say next. Allowing AI to listen in on sales discussions can significantly influence the success rate of closed agreements. By listening for changes in voice intonation and analyzing specific phrases and words said, AI bots may detect clues about which difficulties are preventing the sale from moving forward and which can be rectified to advance the purchase. AI combines unrelated data sources, such as CRM and meteorological data. Details like past sales data and social media posts are also considered. Teams may use AI's practical insights to anticipate opportunities, be ready for them, and grasp them.

According to research, the major suppliers of Customer Relationship Management (CRM) systems have started investing in AI's value addition (Ben Dickson, 2017). Market leader in CRM Sales Force announced Einstein. When it was released last year, this artificial intelligence assistant was accessible throughout the whole platform. To continuously examine



the enormous quantity of data that Sales Forces collects through sales, e-commerce, and communications. The data generated by the IoT and streams from social media are considered with other sources. All of this serves as Einstein's AI prowess. The AI engine will then provide suggestions based on different use cases. For instance, based on previous consumer response trends, it offers advice on when to begin email marketing. According to engagement data analysis, this helps sales representatives focus on the most potential leads. Thanks to AI-powered technologies, sales teams may concentrate their efforts on providing consumers with more complex and demanding demands. These systems gradually improve in capability as they handle business and customer data.

## **RESEARCH GAP**

While considerable research has been done on the use of AI in customer relationship management (CRM), less has been done on the particular AI applications that can be used in CRM. The research on the function of AI in CRM in E-Commerce, particularly in the post-Covid period, is also lacking. More investigation is required to pinpoint the precise AI applications that may be successfully incorporated into CRM and to examine how AI might improve CRM in the E-Commerce sector, particularly in light of the pandemic.

## **METHODOLOGY**

The researcher used the descriptive research approach for the current investigation. The descriptive research method is used to enquire about the impact of artificial intelligence on customer relationship management in The E-Commerce industry post-pandemic period. Research is quantitative, where the researcher has collected primary data from the customer relationship manager in the e-commerce company, say Amazon. The researcher has enquired about the aspects of customer relationship management in the post-pandemic period and how artificial intelligence can be used to perform customer relationship management practices effectively.

## **DATA COLLECTION AND MANAGEMENT**

Data was gathered using an online questionnaire consisting of 5 questions about the impact of artificial intelligence on customer relationship management in the e-commerce industry. Around 50 employees from Amazon India were contacted using online platforms such as email, WhatsApp & Facebook. The online link was shared with them, and they were asked to fill in the questionnaire as per their opinion. The response was collected, and it was found that around 45 responses were duly filled, and it was incorporated in the analysis of the study.



## DATA ANALYSIS

The researcher used spreadsheet software to examine the data that had been collected. The study outcomes were subjected to statistical analysis by deriving the mean and the standard deviation.

**Table 1: The frequency distribution of obtained responses from the questionnaire**

Sr. No.	Questions	Responses				
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		Frequency	Frequency	Frequency	Frequency	Frequency
1	Post pandemic period has emphasized customers to rely on AI-oriented approaches for their needs	22	10	3	7	3
2	The e-commerce industry uses AI to process the data of consumers and engage with them via chatbots, and assist with searching, sorting, and locating a suitable product.	20	12	4	6	3
3	AI is more effective and accurate, and it allows for the large-scale collection, processing, and inference of data from consumers	12	18	5	8	2
4	The e-commerce industry is developing customer-centric search retarget recommendations, combatting fraudulent reviews, and voice-powered search through AI.	16	9	5	7	8
5	Customer Relationship management is positively influenced by the use of AI	14	14	7	5	5

Data Source: Author compilation



## RESULTS

**Table 2: Statistical Analysis of the response obtained**

Queries	n	Mean Score	Std. Deviation
Customer Reliance on AI	45	2.08	2.012461
AI for processing consumer data and engaging via chatbots,	45	2.11	1.824829
AI for the large-scale collection, processing, and inference of data of consumers in e-commerce	45	2.33	2.118962
Customer-centric search retarget recommendations through AI	45	2.6	2.545584
Customer Relationship management is positively influenced by the use of AI	45	2.4	2.260531

Data Source: Author compilation

## DISCUSSION

The study results show that post-pandemic consumer behavior and their dependence on AI-oriented ways to satisfy their demands have been significantly impacted. The e-commerce sector uses AI to interact with consumers and handle their data more efficiently, improving customer relationship management. Processing vast volumes of data fast and accurately is one of the critical advantages of employing AI in e-commerce. According to the survey results, this has led to better decision-making procedures and a greater understanding of consumer behavior. To improve the entire customer experience, AI is used, for instance, to examine consumer search histories, product preferences, and purchase histories in order to make tailored suggestions. Using voice-powered search and chatbots to communicate with consumers more effectively is another advantage of implementing AI in customer relationship management. The poll found that these AI-focused strategies have successfully raised customer happiness and retention. The survey findings imply that the e-commerce sector employs AI to create customer-centric search and remarketing tactics. In order to do this, client data must be analyzed to pinpoint the customers' requirements and preferences, which are then targeted with relevant offers and goods. According to the report, these customer-centered initiatives have successfully boosted customer recommendations and thwarted fake reviews. Overall, the survey finds AI is critical to customer relationship management in e-commerce. AI is used to handle data more efficiently, advance decision-making, and improve the consumer experience. This implies that companies investing in AI-focused strategies will probably have a competitive edge post-pandemic.

## CONCLUSIONS



The study infers that AI plays a significant part in preserving relationships with consumers by offering dependable services that keep them as clients for a longer time. After the pandemic, consumers are getting increasingly engaged in the e-commerce industry for many reasons, including its user-friendly interface and convenience of payment. The one-click ordering and diversity of offered products are attracting consumers. Also, the automated suggestions based on consumer searches on their website are helpful.

E-commerce companies also keep in touch with their customers by charging a small membership fee and offering them a choice of gift cards and deals. Also, it was shown that e-commerce companies use various successful strategies to attract new customers and cling to existing ones. The artificial intelligence-powered user interface is considered reliable and thought to be user-friendly, well-organized, efficient, attractive, and informative by the customers. The e-commerce company must update its clients on the most recent deals or sales using channels including emails, pop-up notifications, and text messaging. Lastly, it may be argued that AI helps maintain customer relationship management during a pandemic.

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