



## Role of AI in transforming traditional customer relationship management practices

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### Abstract

In the contemporary business environment, organizations increasingly focus on building strong, long-term customer relationships to maintain competitiveness. Traditional Customer Relationship Management (CRM) systems have served as essential tools to manage customer interactions, streamline sales processes, and enhance satisfaction. However, these conventional systems, reliant on manual processes and historical data, often fall short in delivering real-time insights, personalized experiences, and predictive decision-making capabilities. The rapid advancement of Artificial Intelligence (AI) has revolutionized CRM by integrating technologies such as machine learning, predictive analytics, natural language processing, and intelligent automation. AI-powered CRM systems enable organizations to analyze vast volumes of structured and unstructured data, predict customer behavior, and recommend optimal strategies, thereby enhancing operational efficiency and decision accuracy.

This study aims to examine the transformative role of AI in traditional CRM practices and its impact on customer experience, satisfaction, and organizational performance. Using a descriptive and analytical research design, primary data were collected from 150 respondents, including CRM managers, marketing professionals, and customer service executives, through structured questionnaires. Secondary data were sourced from journals, books, and industry reports. Data were analyzed using descriptive statistics, mean, and standard deviation to assess perceptions, adoption patterns, and benefits of AI-enabled CRM systems.

Findings reveal that AI-driven CRM significantly improves personalization, response time, predictive capabilities, and service quality, leading to enhanced customer satisfaction and stronger relationships.

**Keywords:** Artificial intelligence, customer relationship management (crm), customer experience, predictive analytics, digital transformation

### Introduction

In today's highly competitive and digitally driven business environment, organizations are increasingly focusing on building long-term and meaningful relationships with customers. Customer Relationship Management (CRM) has traditionally served as a strategic tool to manage customer interactions, streamline sales processes, and enhance customer satisfaction. Conventional CRM systems primarily relied on manual data entry, rule-based automation, and historical data analysis, which often limited their ability to deliver real-time insights and personalized customer engagement.

The rapid advancement of Artificial Intelligence (AI) has significantly transformed the scope and functionality of traditional CRM practices. AI technologies such as machine learning, natural language processing, predictive analytics, and intelligent automation have enabled organizations to move beyond reactive customer management toward proactive and predictive relationship building. AI-powered CRM systems can analyze large volumes of structured and unstructured customer data to identify patterns, predict customer behavior, and recommend optimal actions, thereby enhancing decision-making efficiency and accuracy.

One of the most notable contributions of AI to CRM is the ability to deliver highly personalized customer experiences. AI-driven CRM platforms can customize marketing messages, product recommendations, and service responses based on individual customer preferences and behavioral patterns. Chatbots and virtual assistants powered by AI have further revolutionized customer service by providing instant,

round-the-clock support, reducing response time, and improving overall customer satisfaction.

Moreover, AI has transformed sales and marketing functions within CRM by enabling accurate sales forecasting, intelligent lead scoring, and automated campaign management. These capabilities help organizations allocate resources more effectively, improve conversion rates, and strengthen customer loyalty. Unlike traditional CRM systems that largely depend on past data, AI-enabled CRM solutions continuously learn and adapt, making them more dynamic and responsive to changing customer needs.

Despite its numerous advantages, the integration of AI into CRM also presents challenges related to data privacy, ethical considerations, technological complexity, and employee adaptation. Therefore, understanding the role of AI in transforming traditional CRM practices is essential for organizations aiming to leverage its full potential while ensuring responsible and sustainable implementation. This study seeks to examine how AI-driven technologies are reshaping CRM practices and contributing to enhanced customer value and organizational performance.

### Literature Review

Customer Relationship Management (CRM) has long been recognized as a strategic approach for managing interactions with customers and enhancing organizational performance. Early studies on CRM emphasized its role in improving customer retention, sales effectiveness, and service quality through systematic data management and relationship-building processes (Payne & Frow, 2005) <sup>[6]</sup>. Traditional

CRM systems primarily focused on storing customer information, managing transactions, and supporting operational activities, but lacked advanced analytical and predictive capabilities.

With the rapid growth of digital technologies, researchers began to highlight the limitations of conventional CRM practices. According to Buttle and Maklan (2019) <sup>[2]</sup>, traditional CRM systems are largely reactive and dependent on historical data, making them insufficient for addressing dynamic customer needs in real time. This limitation paved the way for the integration of advanced technologies such as Artificial Intelligence (AI) into CRM systems.

Artificial Intelligence has emerged as a transformative force in CRM by enabling organizations to analyze large volumes of customer data and generate actionable insights. Davenport, Guha, Grewal, and Bressgott (2020) <sup>[3]</sup> emphasized that AI-driven analytics significantly enhance decision-making capabilities by identifying hidden patterns in customer behavior. Machine learning algorithms allow CRM systems to continuously learn from customer interactions and improve predictive accuracy over time.

Several studies have examined the role of AI in enhancing customer experience through CRM platforms. Kumar, Dixit, Javalgi, and Dass (2021) <sup>[4]</sup> found that AI-enabled personalization in CRM systems leads to higher customer satisfaction and loyalty. AI technologies such as chatbots and virtual assistants have been widely studied for their ability to provide instant customer support and improve service efficiency. Research by Adamopoulou and Moussiades (2020) <sup>[1]</sup> highlighted that AI-powered chatbots reduce response time and operational costs while maintaining consistent service quality.

The application of AI in sales and marketing functions of CRM has also gained significant attention in the literature. Wedel and Kannan (2016) <sup>[8]</sup> reported that AI-driven CRM tools improve lead scoring, customer segmentation, and targeted marketing campaigns, thereby increasing conversion rates. Predictive analytics within CRM systems enables organizations to forecast customer demand and sales trends more accurately, leading to better resource allocation and strategic planning.

Despite the growing benefits of AI-based CRM systems, scholars have also raised concerns regarding ethical issues, data privacy, and organizational challenges. According to Martin and Murphy (2017) <sup>[5]</sup>, the use of AI in customer data analysis raises significant privacy and trust-related issues, particularly when personal data is used for automated decision-making. Additionally, studies by Venkatesh *et al.* (2012) <sup>[7]</sup> emphasize that employee acceptance and organizational readiness play a crucial role in the successful implementation of AI-driven CRM solutions.

### Scope of the Study

The scope of the present study is confined to examining the role of Artificial Intelligence in transforming traditional Customer Relationship Management (CRM) practices in business organizations. The study focuses on understanding how AI technologies such as machine learning, predictive analytics, natural language processing, and intelligent automation are being integrated into CRM systems to improve customer interaction, personalization, and decision-making processes. The research covers key functional areas of CRM, including sales management, marketing automation, and customer service operations, with particular

emphasis on customer experience, satisfaction, and relationship building. It evaluates the effectiveness of AI-driven CRM tools in comparison to conventional CRM systems, highlighting changes in operational efficiency and strategic outcomes. The study is limited to organizations that have adopted or are in the process of adopting AI-enabled CRM solutions. It considers the perspectives of managers, employees, and customers to analyze organizational readiness, user acceptance, and perceived benefits of AI-based CRM practices. The research also addresses challenges related to data quality, privacy, ethical concerns, technological infrastructure, and skill requirements associated with AI implementation in CRM.

### Significance of the Study

The significance of the present study lies in its contribution to understanding the transformative role of Artificial Intelligence in Customer Relationship Management (CRM) practices in the contemporary business environment. As organizations increasingly adopt AI-enabled technologies to manage customer relationships, this study provides valuable insights into how traditional CRM systems are evolving into intelligent, data-driven platforms.

From an academic perspective, the study adds to the existing body of literature on AI and CRM by systematically examining the integration of advanced AI tools such as machine learning, predictive analytics, and intelligent automation within CRM frameworks. It helps bridge the research gap between conventional CRM models and emerging AI-driven CRM practices, offering a conceptual and empirical foundation for future researchers and scholars in the fields of commerce, management, and information systems.

### Objective of the Study

1. To examine the concept and evolution of Artificial Intelligence in Customer Relationship Management (CRM).
2. To analyze the limitations of traditional CRM practices and the need for AI-based transformation.
3. To assess the impact of AI-driven CRM on customer experience, satisfaction, and relationship quality.
4. To identify the key benefits of adopting AI in CRM practices for business organizations.

### Research Methodology

1. **Research Design:** The present study adopts a descriptive and analytical research design to examine the role of Artificial Intelligence in transforming traditional Customer Relationship Management (CRM) practices. The study aims to analyze perceptions, adoption patterns, and impacts of AI-enabled CRM systems on organizational performance and customer relationships.
2. **Nature of the Study:** The research is empirical in nature, combining both quantitative and qualitative approaches to provide a comprehensive understanding of AI-driven CRM transformation.
3. **Sources of Data:** Primary data are collected through a structured questionnaire administered to CRM managers, marketing and sales professionals, and Customer service executives. Secondary data are

collected from Research journals, Books and edited volumes, Company reports and white papers, published articles, conference proceedings, reputed websites related to AI and CRM.

**4. Sampling Design**

- **Population:** Organizations using or transitioning to AI-enabled CRM systems
- **Sampling Technique:** Convenience sampling / Purposive sampling
- **Sample Size:** 150 respondents
- **Sampling Unit:** Employees and managers involved in CRM-related functions

**5. Period of the Study:** The study covers a specific time period 2024–2025 during which data are collected and analyzed.

**6. Ethical Considerations:** Participation is voluntary, Confidentiality of respondents is ensured, Data are used strictly for academic research purposes.

**Limitation of the Study**

1. The study is limited to organizations that have adopted or are in the process of adopting AI-enabled CRM systems; therefore, the findings may not be applicable

to organizations still using only traditional CRM practices.

2. The research primarily relies on primary data collected through a questionnaire, which may be subject to respondent bias, personal perceptions, and varying levels of understanding of Artificial Intelligence concepts.
3. The sample size and sampling technique (convenience or purposive sampling) may restrict the generalizability of the findings to a broader population or different industry contexts.
4. Due to time and resource constraints, in-depth qualitative methods such as interviews or longitudinal analysis could not be extensively incorporated.

**Data Analysis and Interpretation**

**Objective 1:** To examine the concept and evolution of Artificial Intelligence in Customer Relationship Management (CRM)

**Data Collection Tables (N = 150 Respondents)**

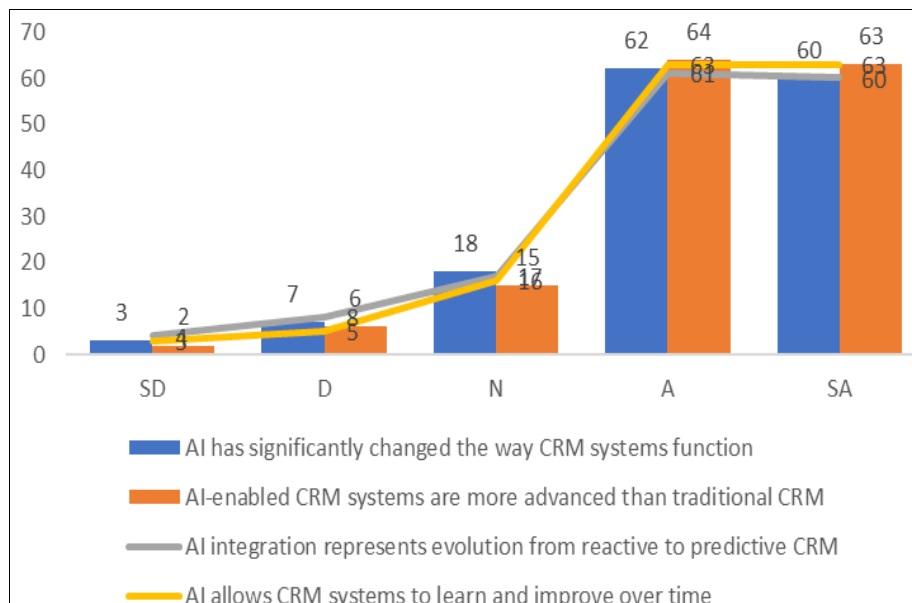
**Scale:**

1. Strongly Disagree (SD),
2. Disagree (D),
3. Neutral (N),
4. Agree (A),
5. Strongly Agree (SA)

**Table 1:** Concept and Evolution of AI in CRM

Statement	SD	D	N	A	SA	Total
AI has significantly changed the way CRM systems function	3	7	18	62	60	150
AI-enabled CRM systems are more advanced than traditional CRM	2	6	15	64	63	150
AI integration represents evolution from reactive to predictive CRM	4	8	17	61	60	150
AI allows CRM systems to learn and improve over time	3	5	16	63	63	150

Source: Questionnaire



**Interpretation:** The data indicates that respondents strongly perceive Artificial Intelligence (AI) as a transformative force in Customer Relationship Management (CRM). A majority of respondents agreed or strongly agreed that AI has significantly changed CRM system functionality, with 122 out of 150 expressing positive responses. Similarly, 127

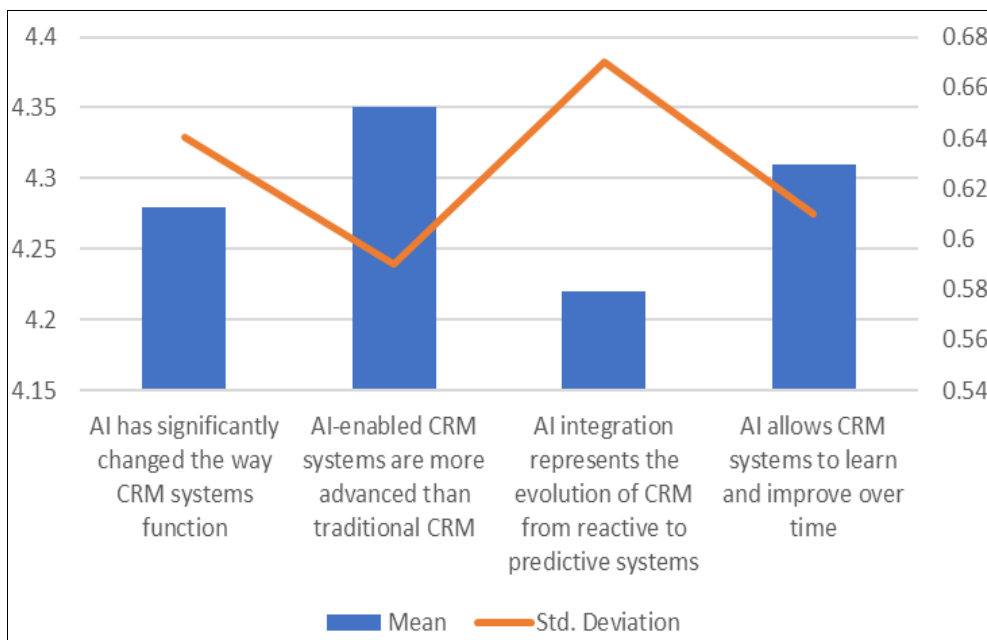
respondents recognized AI-enabled CRM systems as more advanced than traditional systems, highlighting the technological superiority of AI-driven platforms. Furthermore, 121 respondents agreed that AI integration shifts CRM from reactive to predictive approaches, emphasizing its role in proactive customer engagement.

Finally, 126 respondents acknowledged that AI allows CRM systems to learn and improve over time, reflecting the adaptive and dynamic capabilities of AI in enhancing operational efficiency and decision-making.

Overall, these results demonstrate a strong consensus that AI is redefining traditional CRM practices by making them intelligent, predictive, and continuously improving to meet evolving customer needs.

**Table 2:** Perception on Concept and Evolution of AI in CRM

Statements	Mean	Std. Deviation
AI has significantly changed the way CRM systems function	4.28	0.64
AI-enabled CRM systems are more advanced than traditional CRM	4.35	0.59
AI integration represents the evolution of CRM from reactive to predictive systems	4.22	0.67
AI allows CRM systems to learn and improve over time	4.31	0.61



**Analysis:** The mean values for all statements are above 4.20, indicating a high level of agreement among respondents regarding the concept and evolution of AI in CRM. The low standard deviation values reflect consistency in respondents’ opinions.

evolutionary force in CRM. AI is perceived to have transformed CRM from traditional data-recording systems into intelligent, learning-oriented, and predictive platforms. This confirms the growing importance of AI in redefining CRM practices.

**Interpretation:** The findings suggest that respondents strongly acknowledge Artificial Intelligence as a key

**Objective 2:** To analyze the limitations of traditional CRM practices and the need for AI-based transformation

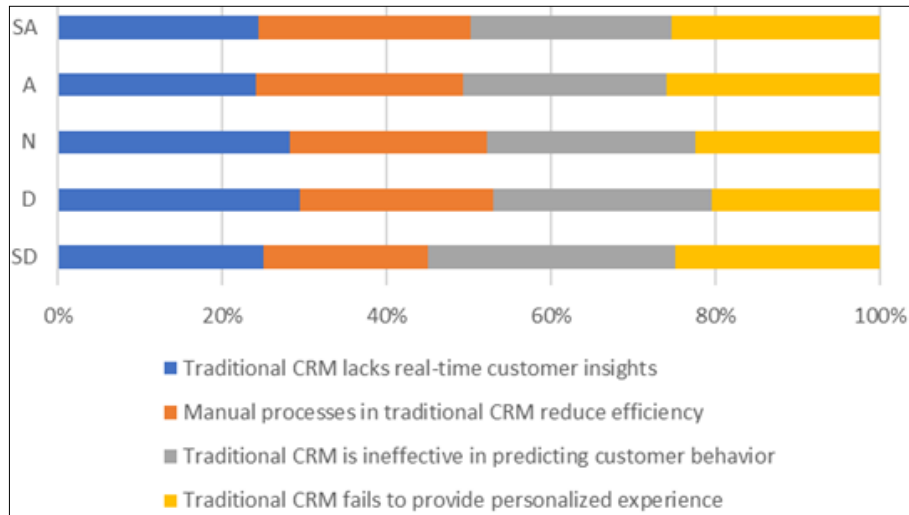
**Table 3:** Limitations of Traditional CRM and Need for AI

Statement	SD	D	N	A	SA	Total
Traditional CRM lacks real-time customer insights	5	10	20	60	55	150
Manual processes in traditional CRM reduce efficiency	4	8	17	63	58	150
Traditional CRM is ineffective in predicting customer behavior	6	9	18	62	55	150
Traditional CRM fails to provide personalized experience	5	7	16	65	57	150

Source: Questionnaire

**Interpretation:** The data reveals that respondents perceive significant limitations in traditional CRM systems, highlighting the need for AI-driven transformation. A majority of respondents (115 out of 150) agreed or strongly agreed that traditional CRM lacks real-time customer insights, demonstrating its inability to provide timely and actionable information. Similarly, 121 respondents indicated that manual processes in conventional CRM reduce efficiency, while 117 noted its ineffectiveness in predicting

customer behavior. Furthermore, 122 respondents agreed that traditional CRM fails to deliver personalized experiences, emphasizing its limitations in catering to individual customer needs. Overall, these findings indicate that conventional CRM practices are largely reactive, inefficient, and inadequate for dynamic customer engagement, underscoring the importance of integrating AI to enhance decision-making, personalization, and operational effectiveness.



**Table 4:** Limitations of Traditional CRM Practices

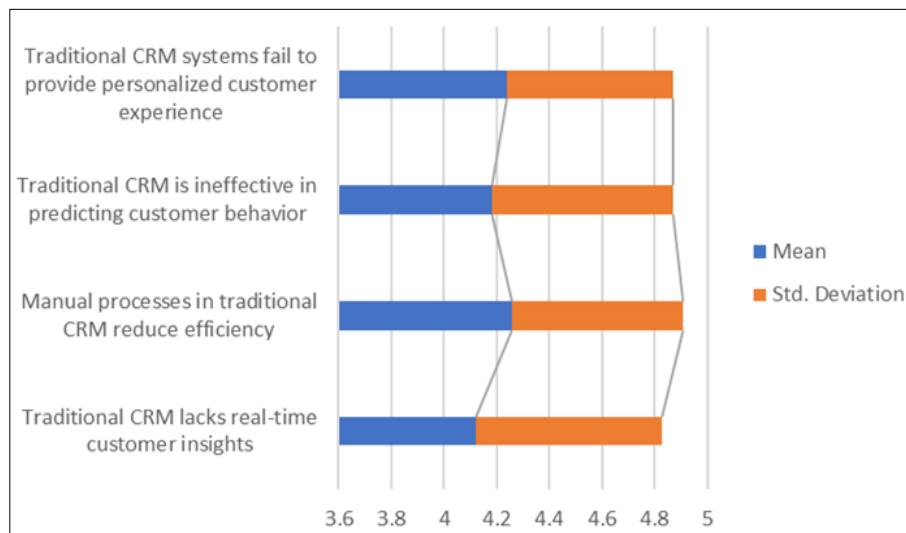
Statements	Mean	Std. Deviation
Traditional CRM lacks real-time customer insights	4.12	0.71
Manual processes in traditional CRM reduce efficiency	4.26	0.65
Traditional CRM is ineffective in predicting customer behavior	4.18	0.69
Traditional CRM systems fail to provide personalized customer experience	4.24	0.63

**Analysis:** All statements record mean values above 4.10, indicating strong agreement that traditional CRM practices have significant limitations. Respondents particularly emphasized inefficiency and lack of personalization.

based transformation in CRM systems. Traditional CRM practices are perceived as reactive, time-consuming, and insufficient for handling dynamic customer expectations.

This limitation creates strong justification for adopting AI-driven CRM solutions.

**Interpretation:** The results highlight a clear need for AI-



**Objective 3:** To assess the impact of AI-driven CRM on customer experience, satisfaction, and relationship quality

**Table 4:** Impact of AI-Driven CRM on Customer Experience and Relationship Quality

Statement	SD	D	N	A	SA	Total
AI-based CRM improves customer experience	2	6	14	65	63	150
AI-driven personalization increases customer satisfaction	1	5	13	66	65	150
AI-enabled CRM helps build long-term customer relationships	3	6	15	64	62	150
AI chatbots improve service quality and response time	2	7	14	66	61	150

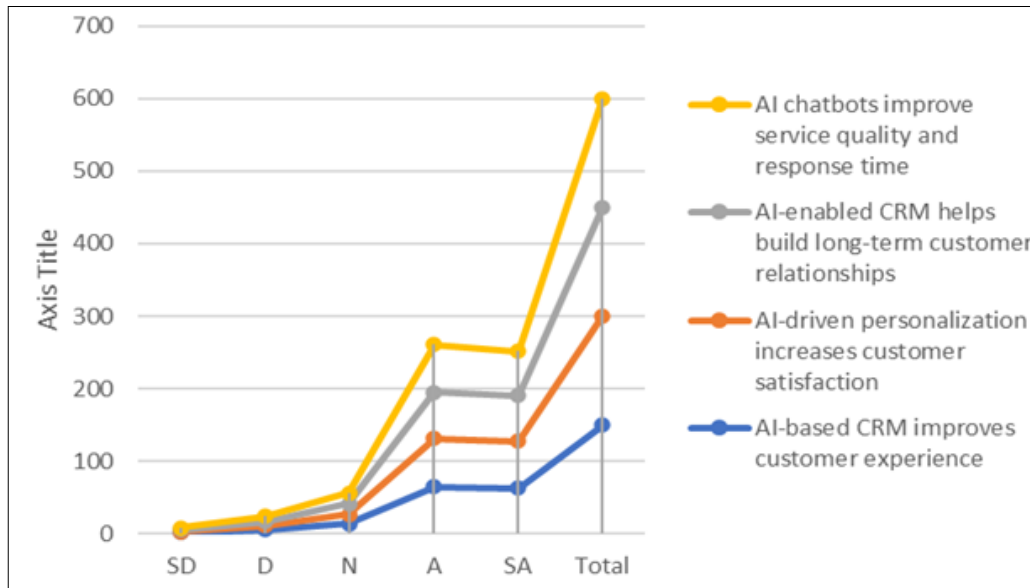
Source: Questionnaire

**Interpretation:** The data indicates that AI-driven CRM has a significant positive impact on customer experience and relationship quality. A majority of respondents (128 out of

150) agreed or strongly agreed that AI-based CRM improves overall customer experience, while 131 respondents emphasized that AI-driven personalization

enhances customer satisfaction by tailoring interactions to individual preferences. Additionally, 126 respondents acknowledged that AI-enabled CRM helps build long-term customer relationships through proactive engagement and predictive insights. Furthermore, 127 respondents recognized the role of AI chatbots in improving service

quality and reducing response time. Overall, these findings confirm that AI integration in CRM systems enhances personalization, responsiveness, and relationship management, leading to higher customer satisfaction and stronger, more sustainable customer relationships.



**Table 5:** Impact of AI-Driven CRM on Customer Experience

Statements	Mean	Std. Deviation
AI-based CRM improves customer experience	4.34	0.58
AI-driven personalization increases customer satisfaction	4.41	0.55
AI-enabled CRM helps in building long-term customer relationships	4.29	0.60
AI chatbots enhance service quality and response time	4.37	0.57

**Analysis:** The high mean scores (above 4.29) indicate that respondents strongly perceive AI-driven CRM as having a positive impact on customer experience, satisfaction, and relationship quality.

personalization, quick responses, and proactive engagement. This leads to improved satisfaction and stronger customer relationships, demonstrating the effectiveness of AI-driven CRM practices.

**Interpretation:** The findings confirm that AI-enabled CRM systems significantly enhance customer interactions through

**Objective 4:** To identify the key benefits of adopting AI in CRM practices for business organizations

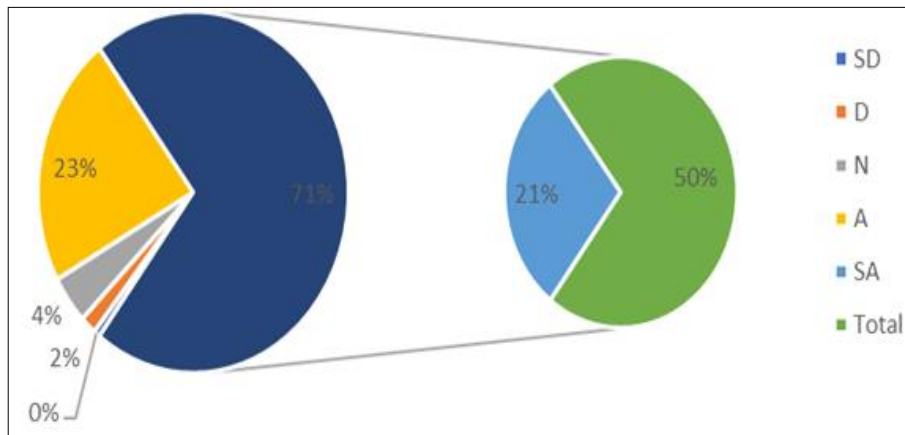
**Table 6:** Benefits of Adopting AI in CRM Practices

Statement	SD	D	N	A	SA	Total
AI-driven CRM improves decision-making accuracy	2	5	13	68	62	150
AI-based CRM increases employee productivity	3	7	19	63	58	150
AI-enabled CRM improves sales and marketing performance	2	6	14	67	61	150
AI adoption in CRM provides competitive advantage	1	5	12	70	62	150

Source: Questionnaire

**Interpretation:** The data highlights that adopting AI in CRM practices offers substantial organizational benefits. A majority of respondents (130 out of 150) agreed or strongly agreed that AI-driven CRM improves decision-making accuracy, indicating enhanced data-driven strategic planning. Similarly, 121 respondents reported that AI-based CRM increases employee productivity by automating routine tasks and allowing focus on strategic initiatives. Additionally, 128 respondents acknowledged improvements

in sales and marketing performance due to AI-enabled CRM tools such as predictive analytics and intelligent lead scoring. Furthermore, 132 respondents recognized that AI adoption provides a competitive advantage by enhancing customer engagement and operational efficiency. Overall, the findings demonstrate that AI integration in CRM not only strengthens organizational performance but also contributes to sustainable business growth and market competitiveness.



**Table 7: Benefits of AI Adoption in CRM**

Statements	Mean	Std. Deviation
AI-driven CRM improves decision-making accuracy	4.38	0.56
AI-based CRM increases employee productivity	4.21	0.66
AI-enabled CRM improves sales and marketing performance	4.33	0.59
AI adoption in CRM provides competitive advantage	4.40	0.54

**Analysis:** Mean values range from 4.21 to 4.40, showing strong agreement regarding the benefits of AI adoption in CRM. Low standard deviations indicates uniform responses.

**Interpretation:** The analysis reveals that AI adoption in CRM offers multiple organizational benefits, including improved decision-making, enhanced productivity, better sales performance, and competitive advantage. These benefits emphasize AI as a strategic tool for modern CRM effectiveness.

**Findings of the Study**

1. The study finds that Artificial Intelligence has significantly transformed the concept and scope of Customer Relationship Management. Respondents strongly agreed that AI has evolved CRM systems from traditional data-recording tools into intelligent, predictive, and learning-oriented platforms.
2. The findings reveal that traditional CRM practices suffer from major limitations such as lack of real-time customer insights, heavy dependence on manual processes, inability to predict customer behavior, and poor personalization. These limitations have created a strong need for AI-based CRM transformation.
3. The study indicates that AI-driven CRM systems have a positive and significant impact on customer experience. Respondents acknowledged improvements in personalization, faster response time, and enhanced service quality through AI-enabled CRM tools such as chatbots and predictive analytics.
4. The research finds that AI-based CRM contributes to higher customer satisfaction and stronger relationship quality. AI-enabled systems help organizations build long-term relationships by proactively addressing customer needs and expectations.
5. The findings show that the adoption of AI in CRM practices improves organizational performance by enhancing decision-making accuracy, sales forecasting, and marketing effectiveness.
6. The study reveals that AI-driven CRM increases employee productivity by automating routine CRM

activities, allowing employees to focus on strategic and value-added tasks.

7. It is also found that organizations adopting AI-based CRM gain a competitive advantage in the market through improved customer engagement, data-driven strategies, and operational efficiency.
8. Despite the benefits, the study identifies challenges such as high implementation costs, lack of skilled manpower, data privacy concerns, and resistance to change among employees.

**Suggestion**

1. Organizations should invest in AI-enabled CRM systems to overcome the limitations of traditional CRM practices and remain competitive in a rapidly evolving digital business environment.
2. Management should focus on providing adequate training and skill development programs for employees to enhance acceptance and effective use of AI-driven CRM tools.
3. Organizations must develop strong data governance frameworks to ensure ethical use of AI, data privacy, and security in CRM practices.
4. Top management support is essential for successful AI-based CRM implementation. Strategic planning and resource allocation should be aligned with long-term CRM objectives.
5. Businesses should adopt a phased approach to AI integration in CRM, starting with basic automation and gradually moving toward advanced predictive and analytical capabilities.
6. Organizations should continuously monitor and evaluate AI-driven CRM performance to ensure alignment with customer expectations and business goals.
7. CRM software developers should design user-friendly AI tools that are transparent and explainable to enhance employee trust and usability.
8. Policymakers and regulatory bodies should frame clear guidelines for ethical and responsible use of Artificial Intelligence in customer data management.

## Conclusion

The present study concludes that Artificial Intelligence plays a transformative role in reshaping traditional Customer Relationship Management (CRM) practices. The integration of AI technologies such as machine learning, predictive analytics, and chatbots has shifted CRM systems from reactive and manual frameworks to intelligent, predictive, and customer-centric platforms. The findings clearly indicate that traditional CRM practices are inadequate in meeting the demands of modern customers due to their inability to provide real-time insights, personalization, and proactive engagement.

The study further concludes that AI-driven CRM significantly enhances customer experience, satisfaction, and relationship quality by enabling personalized communication, faster service delivery, and data-driven decision-making. AI-based CRM systems not only strengthen customer relationships but also contribute to improved sales performance, marketing effectiveness, employee productivity, and competitive advantage for business organizations.

Despite certain challenges related to cost, skill gaps, and data privacy, the overall benefits of AI adoption in CRM outweigh its limitations. Therefore, the study concludes that Artificial Intelligence is no longer optional but a strategic necessity for organizations aiming to achieve sustainable customer relationship management and long-term business success in the digital era.

## Managerial Implication

1. Managers should view AI-enabled CRM as a strategic investment rather than a technological upgrade, as it directly impacts customer satisfaction and organizational performance.
2. CRM managers can utilize AI-driven insights to design personalized marketing strategies, improve customer engagement, and enhance service quality.
3. Sales managers can leverage AI-based CRM tools for accurate sales forecasting, intelligent lead scoring, and performance monitoring.
4. Human resource managers should focus on training and reskilling employees to ensure effective adoption and utilization of AI-based CRM systems.
5. Top management must ensure strong leadership support, adequate infrastructure, and change management strategies to overcome employee resistance.
6. Managers should establish clear ethical guidelines and data protection policies to maintain customer trust while using AI-driven CRM solutions.
7. Continuous monitoring and evaluation of AI-based CRM performance will help managers align CRM strategies with evolving customer expectations.

## Future Scope of Research

1. Future studies may conduct longitudinal research to examine the long-term impact of AI-driven CRM on customer loyalty and organizational performance.
2. Comparative studies can be undertaken between AI-enabled CRM and traditional CRM systems across different industries.
3. Further research may focus on sector-specific analysis such as banking, retail, healthcare, tourism, and MSMEs.

4. Future studies can explore customer perceptions and acceptance of AI-based CRM systems in greater depth.
5. Researchers may examine the role of emerging AI technologies such as Generative AI and Explainable AI (XAI) in CRM practices.

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