

AI-DRIVEN PERSONALIZATION IN CUSTOMER RELATIONSHIP MANAGEMENT: CHALLENGES AND OPPORTUNITIES

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ABSTRACT

Artificial Intelligence (AI) has emerged as a transformative technology with the potential to revolutionize various industries, including customer relationship management (CRM). This research study aims to explore the role of AI in enhancing CRM practices and improving customer experiences. This research paper discusses AI and CRM can analyze vast amounts of customer data, automate routine processes, and deliver personalized experiences on a large scale. By harnessing the power of AI, organizations can gain valuable insights into customer preferences, behavior patterns, and purchase history, allowing them to tailor their offerings and communications to individual customers. This paper explores the potential of AI in enhancing CRM strategies and improving customer experiences, ultimately leading to increased customer satisfaction and loyalty. The findings of this research will contribute to the growing body of knowledge on the application of AI in CRM and provide practical insights for organizations seeking to leverage AI technologies.

Keywords: *Customer Experience; Personalization; Customer Preferences; AI-Driven CRM; Accuracy*

1. INTRODUCTION

Customer Relationship Management (CRM) plays a pivotal role in organizations' success by fostering strong and lasting relationships with customers. However, with the rapid advancements in technology, the traditional approaches to CRM are evolving to meet the demands of an increasingly digital and interconnected world. One technology that has gained significant attention in recent years for its potential to transform CRM is Artificial Intelligence (AI). AI offers new opportunities to enhance customer interactions, improve service delivery, and drive personalized experiences. This chapter provides an introduction to the role of AI in enhancing CRM practices, highlighting its benefits, challenges, and implications for organizations. [2]

AI encompasses a range of technologies, including natural language processing, machine learning, and predictive analytics, that enable computers to simulate human-like intelligence and perform tasks autonomously. In the context of CRM, AI can be utilized to analyze large volumes of customer data, automate routine processes, and

deliver personalized experiences at scale [5]. By leveraging AI, organizations can gain valuable insights into customer preferences, behavior patterns, and purchase history, enabling them to tailor their offerings and communications to individual customers.

While AI has gained widespread use in managerial contexts, there has been a limited focus on AI within management scholarship over the past two decades [4]. The existing body of AI literature has predominantly developed within computer science and operations research disciplines, with an emphasis on exploring machine-handled operational tasks. Conversely, organizational and management research has primarily examined managerial tasks that are traditionally performed by humans [4].

One prominent application of AI in CRM is the use of chatbots and virtual assistants. These AI-powered tools can handle customer inquiries, provide real-time support, and offer personalized recommendations. Chatbots are available 24/7, improving customer service by ensuring swift responses and reducing customer wait times. Virtual

assistants, equipped with natural language processing capabilities, can understand and respond to customer queries, providing an interactive and conversational experience. As a result, organizations can enhance customer satisfaction, engagement, and loyalty through seamless and efficient interactions. [5]

Furthermore, AI-driven predictive analytics empowers organizations to anticipate customer needs and behaviors. By analyzing historical data, AI algorithms can identify trends, patterns, and anomalies, enabling organizations to predict customer preferences, identify upselling or cross-selling opportunities, and proactively address potential issues. This enables organizations to deliver more targeted marketing campaigns, personalized recommendations, and proactive customer support, ultimately leading to improved customer satisfaction and retention. [10]

However, as AI becomes increasingly integrated into CRM practices, organizations must also consider the ethical implications. Privacy concerns arise with the collection and utilization of vast amounts of customer data, necessitating robust data protection and governance measures. Moreover, the potential for algorithmic bias and discriminatory outcomes must be addressed to ensure fairness and inclusivity in AI-driven CRM systems.

This chapter will draw upon the works of leading researchers and practitioners in the field to provide a comprehensive overview of the role of AI in enhancing CRM practices. Noteworthy contributions include the research who investigated the impact of AI chatbots on customer satisfaction and loyalty, and the study by Verhoef et al. (2020), which examined the use of predictive analytics in personalized marketing campaigns. Additionally, the ethical considerations of AI in CRM will be explored to gain insights into managing privacy concerns and mitigating algorithmic bias.[6], [9]

By exploring these studies and others, this chapter aims to shed light on the potential benefits, challenges, and best practices associated with the integration of AI into CRM. Through a comprehensive understanding of the role of AI in enhancing CRM practices, organizations can strategically adopt and effectively utilize AI technologies to deliver exceptional customer

experiences and gain a competitive edge in the digital era. [11]

Currently, there is a significant gap in the literature when it comes to a comprehensive review specifically dedicated to mapping the integration of AI in the CRM domain [12] Addressing this gap, the objective of this paper is to provide an up-to-date overview of the state-of-the-art in AI adoption within CRM and identify emerging themes and potential avenues for future research. To achieve this goal, the authors adopt a systematic and transparent approach, utilizing bibliometric techniques to map the research landscape in an unbiased manner [14]. Specifically, the study employs bibliographic coupling to analyze references, establishing intellectual connections among articles, and utilizes co-occurrence analysis of keywords to gain a comprehensive understanding of the prominent terms, thus enabling the creation of structural visualizations of the research domain.

To explore the application of deep learning techniques in the context of customer relationship management (CRM) with a particular emphasis on predictive analytics. In the paper, El Amrani et al. discuss the methodology and approach used to implement a predictive CRM system based on deep learning. They provide insights into the process of developing and training deep learning models using large datasets to predict customer outcomes, such as purchase behavior, churn probability, or response to marketing campaigns [3].

Prior reviews within the field have primarily concentrated on specific dimensions, such as examining the challenges and applications of Big Data and AI in customer journey modelling or exploring the potential impacts of Big Data and AI on key success factors in CRM [13] and consumers' decision-making processes [7].

2. RESEARCH METHODOLOGY

This chapter presents the research methodology employed to investigate the role of Artificial Intelligence (AI) in enhancing Customer Relationship Management (CRM). The chapter outlines the research design, data collection methods, data analysis techniques, and ethical considerations.

The research design for this study is primarily exploratory and aims to gain insights into the application and impact of AI in CRM. It involves a mixed-methods approach, combining quantitative

analysis of CRM data and qualitative methods such as interviews and surveys. The use of mixed methods allows for a comprehensive understanding of the phenomenon under investigation. [1]

Customer data from CRM systems collected, including purchase history, customer interactions, and engagement metrics. These data will be used for quantitative analysis to evaluate the impact of AI on CRM performance indicators. Online surveys administered to CRM users and customers to gather their perspectives on AI-driven CRM practices. The surveys will capture demographic information, perceptions of AI in CRM, and satisfaction with AI-powered interactions.

Descriptive statistics used to summarize and analyze CRM data, such as customer demographics, purchase frequency, and customer engagement metrics. Inferential statistical techniques, such as regression analysis, employed to examine the relationships between AI adoption in CRM and various performance indicators, such as customer satisfaction, loyalty, and revenue.

Thematic analysis conducted to identify and analyse recurring themes and patterns in the interview and survey responses. This analysis will provide insights into the perceived benefits, challenges, and implications of AI in CRM.

Upon identifying the articles that specifically focus on the investigated theme, we conducted two bibliometric analyses, namely bibliographic coupling and keywords' co-occurrence, to trace the current state-of-the-art regarding the integration of AI in CRM contexts. Prior to applying the bibliometric analysis, we ensured the completeness of the information within the dataset by manually adding any missing cited reference data [3]. To initiate the bibliographic coupling analysis, we clustered the sampled articles based on shared references. This clustering was achieved by quantifying the frequency with which two articles cited the same references. Both bibliographic coupling and co-citation analysis are essential techniques in science mapping. A co-citation network is formed when two articles (nodes) are jointly cited by another document, whereas a bibliographic coupling network is formed when both articles (nodes) make references to a third document, establishing a link.

The following **research hypothesis** are postulated in this study

H_{1a}: Service experience using AI and CRM is positively and significantly related to customer satisfaction.

H_{1b}: Service experience using AI and CRM is positively and significantly related to personalization.

H_{2a}: Service experience only with CRM is positively and significantly related to customer satisfaction.

H_{2b}: Service experience only with CRM is positively and significantly related to accuracy.

H₃: Customer satisfaction using AI and CRM is positively and significantly related to accuracy.

H_{4a}: Customer satisfaction has a significant mediating effect between service experience of using AI and CRM and accuracy.

3. PROCEDURE

The study utilizes an online survey due to its numerous advantages, including flexibility, cost-efficiency, prompt results, convenient administration, and easy storage. To minimize missing data, the survey design incorporated measures to prevent respondents from skipping questions.

Before initiating data collection, a pilot test of the questionnaire was conducted. The data was gathered in February 2023, ensuring that respondents were informed about the voluntary nature of their participation and their right to withdraw at any point. It was explicitly communicated that there were no right or wrong answers, allowing respondents to provide truthful and accurate responses. Within a two-week period, a total of over 500 responses were received. Following the removal of invalid responses (i.e., those with identical answers for all questions), 380 responses remained for further analysis. The sample size was considered sufficient, taking into account the calculation of confidence level, population size, and margin of error.

The sampling plan outlines the target population, sample size, and sampling techniques to be used in the research study investigating the role of Artificial Intelligence (AI) in enhancing Customer Relationship Management (CRM). The target population for this study includes CRM professionals, industry experts, CRM users, and customers who have interacted with AI-powered CRM systems. The population may vary based on

the specific objectives and scope of the research. The sample size will depend on the research objectives, available resources, and the desired level of statistical power. It should be large enough to provide meaningful insights while considering feasibility and practicality.

The measurement items for the study variables were derived from previously validated studies, demonstrating strong reliability and validity. In this study, a 7-point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree) was employed for all the measurement items. This scale was chosen to provide flexibility in responses and to discourage respondents from selecting a neutral stance.

The Likert scale used in this study allowed participants to express their agreement or disagreement on a continuum, ranging from 1 (Strongly disagree) to 7 (Strongly agree). This range was selected to ensure that respondents did not lean towards a neutral position, encouraging more diverse and nuanced responses from the target audience.

Within the respondent pool, approximately half identified as female (50.8%). The largest age group represented was between 18 and 25 years old, accounting for over 28 percent of respondents (28.2%). When considering educational background, around 37 percent of respondents possessed university degrees (37.1%).

4. MEASUREMENT MODEL

In this study, the majority of variables including AI and CRM with customer satisfaction, personalization, customer engagement, and accuracy were assessed as second-order factor constructs. The validity of these constructs was evaluated following the procedures outlined in [8]. Specifically, to assess customer satisfaction and its four dimensions (product/service quality, customer service, trust and security, convenience), a confirmatory factor analysis (CFA) was employed using a hierarchical model.

The second-order factor model demonstrated acceptable fit indices: $\chi^2 = 762.75$, $df = 233$, $\chi^2/df = 3.39$, $p < .001$; CFI = 0.97; TLI = 0.94; RMSEA = 0.08. To further examine the second-order factor structure, a one-factor confirmatory factor analysis (CFA) was performed on the average scores of the four first-order constructs, [5]. The results indicated

a good fit for the model: $\chi^2 = 7.72$, $df = 2$, $\chi^2/df = 3.39$, $p < .001$; CFI = 0.96; TLI = 0.92; RMSEA = 0.08. The same procedures were applied to the other three constructs.

The model fit indices for the second-order structure of personalization with AI were found to be: $\chi^2 = 121.08$, $\chi^2/df = 3.32$, $p < .001$; CFI = 0.96; TLI = 0.95; RMSEA = 0.07. Similarly, for customer engagement, the indices were: $\chi^2 = 887.04$, $df = 265$, $\chi^2/df = 3.45$, $p < .001$; CFI = 0.94; TLI = 0.97; RMSEA = 0.08. Lastly, for accuracy, the model fit indices were: $\chi^2 = 262.67$, $df = 98$, $\chi^2/df = 2.63$, $p < .001$; CFI = 0.97; TLI = 0.96; RMSEA = 0.08.

Table 1 Model fit indices for first and second-order factors

AI and CRM		χ^2	df	χ^2/df	p	CFI	TLI	RMSEA
Customer Satisfaction [CS]	Second order	762.75	233	3.39	***	.97	.94	.08
	One order	7.72	2	3.39	***	.96	.92	.08
Personalization [PER]	Second order	121.08	40	3.32	***	.96	.95	.07
	One order	5.92	2	2.96	***	.98	.97	.07
Customer engagement [CE]	Second order	887.04	265	3.45	***	.94	.97	.08
	One order	6.78	2	3.39	***	.99	.97	.07
Accuracy [ACC]	Second order	262.67	98	2.63	***	.97	.96	.08
	One order	3.42	2	1.71	***	.99	.99	.04

The model fit indices, as presented in Table 1, demonstrated a good fit for both the first-order and second-order factors, with all path coefficients between the indicators and their respective factors found to be significant at the 0.05 level. Given the satisfactory fit of both factor structures, subsequent analyses incorporated both the first-order and second-order factors to assess the proposed relationships. The second-order factors were employed to examine the overall effects, utilizing an aggregated scale comprising the average scores of the subdimensions across all second-order factors, following the approach of [5], [8]. On the other hand, the first-order factors were assessed to understand the effects of the sub-dimensions within each factor on the outcome variables.

The assessment of the CFA for the proposed model prior to hypothesis testing indicated that the model exhibited satisfactory fit indices [9]. The results showed that the model demonstrated acceptable fit, as evidenced by the following

indices: $\chi^2 = 932.52$, $df = 254$, $\chi^2/df = 3.67$, $p < .001$; CFI = 0.95; TLI = 0.95; RMSEA = 0.07. Additionally, all items displayed significant loadings on their respective constructs.

The composite reliabilities of all factors exceeded the predefined threshold of 0.70, demonstrating satisfactory internal consistency. Furthermore, the average variance extracted (AVE) for each factor surpassed the recommended threshold of 0.50, indicating adequate convergence as suggested by Fornell and Larcker (1981). The analysis of standardized residuals and modification indices revealed no statistically significant changes required to be made to the model.[11]. Table 2 presents the validities of all variables.

To verify discriminant validity, a heterotrait-monotrait (HTMT) ratio test was conducted in AMOS. The HTMT results revealed that all correlation ratios were below the threshold of 0.80, indicating acceptable discriminant validity in line with the findings of Nguyen et al. (2019). Additionally, the square root of the average variance extracted (AVE) for each construct exceeded the correlation between constructs, providing further evidence of discriminant validity.[10].

Table 2 Discriminant validities for the study variables

	AVE	CR	CS	PER	CE	ACC	Marker
CS	.83	.95	.91				
PER	.91	.94	.52*	.95			
CE	.85	.95	.44*	.52*	.92		
ACC	.84	.93	.61*	.38*	.43*	.91	
Marker	.82	.92	.05	.08	.06	.07	.90

Note: The diagonal elements represent the square root values of the Average Variance Extracted (AVE), while the off-diagonal elements indicate the correlations among constructs. It is worth noting that the correlation values between variables, both with and without the marker variable, remain unchanged. Additionally, significant correlations are denoted by * $p < .05$."

CS = Customer satisfaction; PER = Personalization; CE = Customer engagement; ACC = Accuracy;

5. HYPOTHESIS TESTING RESULTS

The hypothesis fit indices were deemed acceptable: $\chi^2 = 223.49$, $df = 65$, $\chi^2/df = 3.65$, $p < .001$; CFI = 0.99; TLI = 0.98; RMSEA = 0.08. Moreover, the R-squared values for customer

satisfaction and accuracy exceeded 37% and 71% respectively, demonstrating substantial explanatory capacity across all models.

Hypotheses H_{1a} and H_{1b} propose a positive association between service experience with AI and CRM and both customer satisfaction and personalization. The findings presented in Table 3 provide evidence supporting H_{1a} and H_{1b}, revealing that service experience with AI and CRM had a significant impact on customer satisfaction ($\beta = 0.24$, $p < .05$) and personalization ($\beta = 0.41$, $p < .001$). Hence, H₁ is confirmed.

H_{2a} and H_{2b} propose that service experience only with CRM positively affects customer satisfaction and accuracy. Supporting Hypothesis 2, the findings presented in Table 3 indicate a significant impact of CRM service experience on both customer satisfaction ($\beta = 0.74$, $p < .001$) and accuracy ($\beta = 0.29$, $p < .001$). Hypothesis 3 was supported as the analysis revealed a significant influence of customer satisfaction using AI and CRM have positive relationship on accuracy ($\beta = 0.39$, $p < .001$), indicating that customer satisfaction plays a crucial role in fostering accuracy.

Table 3 Hypothesis test results

Path	β	Sig
Service experience with AI and CRM → Customer satisfaction	0.24	*
Service experience with AI and CRM → Personalization	0.41	**
Service experience with CRM → Customer satisfaction	0.74	**
Service experience with CRM → Accuracy	0.29	**
Customer satisfaction using AI and CRM → Accuracy	0.39	**
R ²		
Customer satisfaction	.39	
Accuracy	.76	

Model fit: $\chi^2 = 223.49$, $df = 65$, $\chi^2/df = 3.65$, $p < .001$; CFI = .99; TLI = .98; RMSEA = .08

The study conducted tests to examine mediation hypotheses in H_{4a}, specifically exploring the role of customer satisfaction as a mediator between AI and CRM, and accuracy. The findings presented in Table 4 demonstrate that customer satisfaction has significant effects on the relationships between service experience with AI and CRM, and accuracy. These results indicate that service experience with AI and CRM directly influences both customer satisfaction and accuracy. Consequently, customer satisfaction is identified as a partial mediator in the

relationship between service experience with AI and CRM, along with personalization and accuracy.

Table 4: Results for mediation testing

Mediator	Between		Estimate	Lower	Upper	P-value	Type of mediation
CS	SE	PER	.08	.02	.13	.018	Partial
CS	CRM	ACC	.29	.25	.37	.001	Partial

The 95% bootstrapping confidence intervals (CI) for the indirect effects on accuracy and personalization of service experience with AI and CRM (CI = 0.24, 0.40) and service experience with CRM (CI = 0.31, 0.46) exclude the value of 0. As a result, this test provides confirmation of the mediation effects of customer satisfaction, thereby providing support for H4a.

6. DISCUSSION

This study investigates the impact of both employee service experience and along with AI and CRM powered service on customer satisfaction and accuracy, recognizing their significance in enhancing operational efficiency and customer experience within service organizations in the current service dominant logic era. The study findings suggest that customer satisfaction, personalization, and accuracy are influenced by the overall experience with AI and CRM. However, when examining the specific dimensions of service experience, these relationships become more intricate and complex.

6.1 AI and CRM experience with customer satisfaction, personalization and accuracy

The study findings indicate that the overall experience with AI and CRM significantly impacts customer satisfaction, personalization, and accuracy. However, when examining the individual dimensions of AI and CRM service, none of them demonstrate a significant relationship with customer satisfaction. On the other hand, the dimensions of competence, friendliness, responsiveness, and professionalism exhibited by employees exert a significant influence on the outcome variable.

The dimension of responsiveness, in the context of employees, refers to their ability to promptly deliver services, willingness to assist, and availability to address customer requests. In contrast, in the case of AI and CRM services, responsiveness relates to the timely response of AI tools. Although AI-powered tools can provide quick responses, these responses are often standardized due to the nature of machine-

operated interactions. Comparatively, customers tend to prefer engaging with employees as they generally have a better experience resulting from the personalized and human touch offered by employee responses.

Table 5 Comparison means of all dimensions of customer service experience with AI and CRM

Customer Dimensions	Means	AI and CRM Dimensions	Means
Responsiveness	5.27	Responsiveness	4.92
Assurance	5.32	Assurance	4.87
Proactivity	5.21	Proactivity	4.89
Security and Privacy	5.30	Security and Privacy	4.72

Upon conducting a post-hoc analysis, it was found that customers rate the dimension of customer responsiveness which is higher (5.27) than AI and CRM responsiveness dimension (4.92) indicating that customers generally have a better experience when interacting with AI and CRM systems due to the standardized nature of the responses.

Assurance refers to the ability of the AI and CRM systems to provide correct and reliable information about customers. It involves accurate data capture, processing, and analysis, which helps in personalizing customer interactions and improving overall satisfaction. Based on the ratings of both AI and CRM assurance, customers rate the later much higher (4.87 vs 5.32)

Proactivity is an important quality dimension related to AI and CRM (Customer Relationship Management) systems. AI-powered CRM systems can use predictive analytics to analyze customer data and behavior patterns to anticipate future needs or issues. AI and CRM systems can leverage contextual information to deliver personalized and proactive engagement with customers. This dimensions why employees' proactivity on AI and CRM had a significant effect on customer service experience and was rated higher by customers (5.21 vs 4.89).

AI and CRM systems deal with a vast amount of sensitive customer data, including personal information, transaction details, and communication records. It is crucial to ensure the security of this data to protect it from unauthorized access, breaches, or malicious activities. AI and CRM systems should implement secure authentication mechanisms to ensure that only authorized users can access sensitive customer data. By addressing

security and privacy as important dimensions, organizations can build trust with their customers and protect sensitive data in AI and CRM systems with mean value of (5.30 vs 4.72)

7. IMPLICATIONS

7.1 Theoretical Implications

In the past decade, there has been a significant increase in the popularity of customer service experience research as a key marketing strategy for achieving customer retention and loyalty. It is crucial to identify effective antecedents or drivers of customer satisfaction to optimize organizational performance. This study makes a valuable contribution to customer satisfaction and accuracy research by examining two important touchpoints in the consumer purchase journey: the experience and interaction with AI and CRM. While most customer satisfaction research primarily focuses on aggressive marketing through competitive promotions or defensive marketing through loyalty programs, this study provides a fresh perspective by exploring customers' service experience with AI and CRM. It sheds light on how machines or robots can potentially contribute to the customer service experience and ultimately impact organizational performance.

While previous research on AI and CRM has predominantly focused on the technical aspects of AI tools, this study goes beyond that by examining their application in the realm of customer satisfaction and accuracy. It highlights that AI-powered CRM services are not solely meant to enhance operational efficiency but can also be leveraged as a marketing approach to engage customers and foster customer loyalty. Traditionally, customer service has been closely linked to customers' behavioral intentions. However, this study takes a distinct approach by investigating the customer service experience within the context of AI and CRM. By incorporating these variables, it aims to understand their individual and unique contributions to explaining customer satisfaction and accuracy.

7.2 Practical Implications

The findings from this research can be utilized by management and marketers to develop effective and sustainable strategies, essential for surviving and remaining competitive. While incorporating AI tools has become common practice for cost-

effective service and improved operational efficiency, it is important to exercise caution and not excessively rely on these tools at the expense of minimizing employee involvement in customer service. This study emphasizes the significance of responsiveness, assurance, personalization, and accuracy in AI tools, as they are closely linked to customer satisfaction. Therefore, it is crucial to focus on reinforcing these strengths to enhance customer-related outcomes.

In addition, the study highlights that not all customer service dimensions are directly impacted by AI and CRM. Therefore, it is crucial for management to accurately identify the specific factors that influence the dimensions relevant to organizational outcomes. The research findings specifically indicate a significant relationship between affective engagement and personalization, as well as accuracy. In light of this, marketers should prioritize strategies that effectively address customers' emotions, such as fostering passion and excitement, to enhance affective engagement.

8. LIMITATIONS OF FUTURE RESEARCH

While the study made every effort to ensure rigor, it is important to acknowledge certain limitations. One such limitation is the selection of only four dimensions to measure the customer service experience with AI and CRM. The study recognizes that AI and CRM encompass multiple dimensions, and by narrowing the focus to only four dimensions, there is a possibility of inhibiting a comprehensive understanding of the impact of AI-powered tools on the customer service experience. The extendable work from this study may develop comprehensive framework that encompasses a broader range of dimensions to measure the customer service experience with AI and CRM. This would provide a more holistic understanding of the impact of AI-powered tools on customer satisfaction and organizational outcomes. Explore how the combination of human expertise and AI capabilities can lead to improved customer experiences and organizational performance. We can also examine how AI tools influence customer lifetime value, repeat purchases, and advocacy. Investigate strategies to foster long-term customer relationships using AI-powered CRM systems.

9. CONCLUSION

This study offers valuable contributions to both theory and practice. From an academic

perspective, it provides a comprehensive analysis of the research landscape surrounding the integration of AI in CRM. By employing rigorous literature review methodologies and objective bibliometric techniques, this study maps the diverse subfields that have emerged within this fragmented literature. As a result, scholars are empowered with a holistic understanding of AI in CRM, enabling them to position their own contributions effectively within this dynamic field.

In response to the call made by Raisch and Krakowski (2020) to develop comprehensive perspectives on the management AI debate, this study identifies and describes three subfields that shape and characterize the literature within the CRM domain. From a managerial perspective, this study provides valuable insights for organizations and managers seeking to leverage AI within their CRM systems. It offers practical guidance on harnessing the opportunities presented by AI and outlines the key directions in which AI-CRM integration is evolving. By incorporating the recommendations and managerial practices outlined in this study, organizations can effectively drive the integration of AI into their CRM strategies, ensuring a powerful and productive implementation. The findings of this study suggest a notable shift in CRM from a data-driven strategy to an AI-driven strategy [2]. Furthermore, recent scholarly research has taken a broader strategic perspective in approaching the topic, aiming to leverage the power of AI to enhance CRM as a whole, rather than solely focusing on investigating specific technological applications to improve operational efficiency or customer experience within individual CRM activities.

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