

Integrating AI with CRM Systems: Enhancing Customer Relationship Management Through Intelligent Automation

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Abstract:- The implementation of artificial intelligence (AI) has substantially transformed the manner in which businesses operate, rendering the notion of "business as usual" obsolete. The marketing sector has undergone substantial changes as a result of the emergence of AI, which has compelled marketing managers to acknowledge the necessity of incorporating AI into their marketing strategy. The incorporation of artificial intelligence (AI) into customer relationship management (CRM) and marketing strategies has resulted in significant improvements in financial gains and client loyalty for businesses. They develop enterprise applications, including marketing automation, analytics, and app development. The responsibilities of marketing managers have subsequently evolved and are anticipated to continue to do so in the future. It appears that the area has not been adequately investigated in relation to its value. Consequently, additional research is necessary.

Keywords: CRM (Customer Relationship Management), AI(Artificial Intelligence), Marketing.

I. INTRODUCTION

This section will elucidate the research's rationale, the thesis topic that was selected, the scope of its coverage, and the potential repercussions. The management of enterprises, notably in the field of marketing, will be the primary focus of this chapter. Subsequently, a succinct overview of ongoing research in disciplines associated with artificial intelligence will be provided. The subsequent phase entails the identification of the research lacuna and the current challenges in the chosen field. Near the chapter's conclusion, the rationale for the research's objectives, research inquiries, and constraints is presented.

Artificial intelligence (AI) is ubiquitous. Although it may be considered a novel concept to some, it has already transformed our way of life. The concept of artificial intelligence was first introduced in 1956 at a conference conducted at Dartmouth College in the United States by distinguished scholars. As per their viewpoint, artificial intelligence (AI) is the capacity of computers to replicate human intellect in a variety of domains, such as comprehension, logical reasoning, and knowledge acquisition. It is widely acknowledged that the majority of individuals regularly interact with artificial intelligence (AI) in some capacity. Artificial Intelligence (AI) is extensively employed in a variety of corporate applications. Traditional practices and cutting-edge innovations are already being influenced by artificial intelligence, which is permeating every aspect of business.

The global gross domestic product is expected to increase by 1.2% annually by 2030, resulting in a total production of one trillion dollars (Bughin, Seong, Manyika, Chui, & Joshi, 2019). The responsibilities of marketing administrators and the use of artificial intelligence in customer relationship management (CRM)

Businesses, particularly those involved in marketing, are increasingly recognizing the growing significance of information technology (IT) and artificial intelligence (AI) in the modern world. Hall (2019) defines artificial intelligence marketing as the utilization of technology to improve the consumer experience. Additionally, the emergence of artificial intelligence (AI) and other forms of digital disruption has altered the responsibilities of marketing managers [1]. It is imperative to have a thorough comprehension of your clients in order to prevent them from defecting to competitors who effectively satisfy their needs and desires. AI enables organizations to monitor their clients' interactions with products and services and acquire more profound insights about them. By gaining access to all pertinent information regarding your target audience, you can make well-informed and logical decisions.

II. RELATED WORKS

The chapter initially offers a succinct summary of the application of AI in marketing before delving into the specific AI tactics employed. These methodologies encompass predictive data analytics, machine learning, and deep learning. The research then proceeds to specify the specific applications of each AI technique in contemporary advertising. The "Implications for Competition" section presents our findings regarding the influence of AI advancements on market competition, offering a comprehensive understanding of the relationship between these innovations and the competitiveness of market participants. Subsequently, we will compare the responsibilities and duties of marketing managers before and after the emergence of artificial intelligence to demonstrate their similarities and differences [2]. The theoretical framework is illustrated to illustrate the influence of AI features on the decision-making and responsibilities of marketing managers. The chapter concludes with a detailed account of the decision-making process. Employing artificial intelligence for marketing purposes.

It is imperative for all organizations to implement innovative marketing strategies in order to maintain their market position. Marketers are incapable of formulating accurate predictions and relying on them for success in the absence of a thorough comprehension of their consumers' preferences. This suggests that they must be adept at acquiring information about their clients and at meeting their needs (Marketing Evolution, 2020). AI is currently at its most proficient. It is equally essential to comprehend the most effective approach to incorporating AI into marketing campaigns in order to develop AI-enabled marketing strategies [3]. These strategies enable marketing stakeholders to make data-driven decisions in real-time (Marketing Evolution, 2020).

Hall (2019) characterizes artificial intelligence marketing as a method for enhancing the consumer experience. AI marketing claims that the incorporation of techniques such as big data analytics can significantly improve the return on investment (ROI) of promotional campaigns through its effective implementation. By integrating machine learning into your marketing strategy, you can optimize the utilization of your target audience's knowledge. AI eliminates virtually all conjectures from client interactions, regardless of whether a corporation employs email marketing or customer support.

Organizations derive substantial value from possessing a comprehensive understanding of artificial intelligence (AI) and its potential to improve their overall strategy. AI is already having a substantial impact on a variety of industries, including e-commerce, transportation, and online finance. Ng (2017) is the source of this information. In the future, it is anticipated that artificial intelligence (AI) will have a substantial impact on consumer behavior, sales prospects, customer support, business structures, and marketing strategies. Research suggests that artificial intelligence (AI) can be a valuable resource for marketing managers and marketers to improve their efficiency and productivity. This can be accomplished by employing automated email exchanges, predictive analytics, lead scoring, consumer insights, and other comparable tools [4].

III. RESEARCH METHODOLOGY

This section delineates the strategies implemented to accomplish our objective and respond to the research question posed in the thesis. This chapter offers a thorough elucidation of the methodologies employed to conduct the research, as well as our research strategy, methodology, and design. This chapter will also serve as a conduit to previous chapters, facilitating the acquisition of pertinent data [5]. The subsequent text provides information about the research participants and the data collection procedure.

Methodology of Research

In order to develop pertinent research inquiries, select appropriate research methodologies, and determine the most effective approach to data collection for the purpose of conducting a comprehensive investigation, researchers must have a philosophical perspective.

Consequently, in response to the data they uncover, researchers must initially express their personal research ethos. The establishment of a strong foundation of acceptable assumptions is essential for the development of a research plan that is both comprehensive and persuasive, which in turn leads to a compelling research report.

In its most fundamental form, ontology is the scientific examination of real-world events that can offer us knowledge and comprehension [6]. It is evident that it exists independently of human perception, which aids scientists in determining the essence and veracity of the subjects they are investigating.

The primary objective of this research is to examine the influence of AI on marketing and the responsibilities that marketing managers assume. Our current research is primarily concentrated on exploration, necessitating additional comprehensive research to investigate the relationship between decision makers, artificial intelligence, and marketing [7]. Additionally, the marketing manager and the specific field of implementation have an impact on the conceptualization of artificial intelligence in marketing. Our report incorporates data from interviews with participant firms and secondary sources to reflect the perspectives of these social institutions. The research's data is subjective, which precludes the drawing of any broad conclusions. Nevertheless, it does provide fascinating insights into the current function of marketing managers and the evolution of marketing. This investigation is founded on constructionist ontology. Epistemology is the research of the acquisition of knowledge [8].



Fig.1: Depicts flowchart for the proposed methodology.

The primary focus of your research is the diverse ways in which artificial intelligence (AI) has revolutionized marketing and the role of marketing managers. The reason for this is the absence of prior research on the subject, which has

prevented us from testing specific hypotheses. Rather, our objective is to provide valuable insights into our research problem. The interpretivist methodology employed in this investigation necessitates that the researcher participate actively in the research process.

We are of the opinion that the interpretivist perspective is the most advantageous approach, as it provides a comprehensive understanding of human behavior. This phenomenon is the result of the convergence of two factors: the emergence of novel technology and the evolving perceptions of artificial intelligence. Both of these factors have an impact on the field of marketing and the responsibilities of marketing managers. A researcher's approach is the manner in which they integrate theoretical frameworks with practical knowledge that is founded on empirical evidence, as per Patel and Davidson (2011). In this investigation, we elect to implement an inductive research methodology. The inductive technique aims to generate new hypotheses by utilizing experimental evidence (Patel & Davidson, 2011). It is most appropriate to employ inductive reasoning as the preferable strategy, as the fourth research is intended to investigate a previously unknown topic and no previous research has generated a theory that can be tested and applied broadly [9].

The qualitative research methodology was employed by the researchers to conduct a comprehensive investigation of the subject. In order to obtain a more profound understanding, qualitative researchers collect and analyze data that is not in numerical form, such as theories, thoughts, and experiences (Bhandri, 2020). Qualitative research is the most effective method for individuals who wish to develop novel concepts or identify the root cause of a well-known problem. Qualitative research is a type of scientific inquiry, as per Lumen Learning (n.d.). Scientific research is an inquiry that endeavors to address a question by employing a structured methodology, gathering relevant evidence, and rendering conclusions that surpass the research's initial objectives (Lumen Learning, n.d.). Additionally, qualitative research endeavors to understand the research subject from the perspective of the local community. Qualitative research is highly beneficial due to its ability to facilitate the acquisition of culturally relevant knowledge. This research, in particular, enhances our understanding of the behavior, cognition, and approach to social issues of a variety of groups (Lumen Learning, n.d.).

The researcher has elected to employ both primary and secondary sources to accumulate relevant information in order to elicit a robust conclusion. The objective of the research is to offer a thorough examination of the influence of AI on the function of marketing managers and customer relationship management (CRM). Primary research involves researchers who actively partake in data collection, as opposed to relying on pre-existing data that is pertinent to the research (Bhatt, 2020). Primary research data is implemented to generate pertinent and dependable conclusions concerning a research issue. The research topic necessitates meticulous planning, which is precisely the objective of the research design. The investigation will be conducted using a variety of structures and procedures, as delineated in the document.

We conducted extensive secondary research for the purpose of our four studies in order to gain a comprehensive understanding of the impact of artificial intelligence (AI) on the marketing aspect of our organization. Our investigation revealed a scarcity of scholarly works that address the impact of artificial intelligence on marketing and customer relationship management (CRM) [10]. However, we have identified a phenomenon within the theory that has been relatively understudied. As a result of ongoing marketing reforms, marketing managers are faced with constantly evolving responsibilities. We endeavored to establish a correlation between the role of marketing managers/decision makers and the impact of AI on marketing management roles through a comprehensive analysis of case studies and extensive research. This led to the successful identification of a three-way connection between the function of these managers, AI, and marketing.

Interviews were the primary research procedure implemented in this investigation. The topic explicitly examined the impact of AI integration on CRM and the responsibilities of marketing managers, which is why interviews were conducted using semistructured questions. It was determined that this question type is the most optimal, as semistructured questions elicit more elaborate responses than free-form inquiries. Our initiative benefited from the examination of the relationship between artificial intelligence (AI), marketing, and decision-making.

IV. RESULTS AND DISCUSSION

The following are the actual results of this investigation. Interviews with three managers of marketing yielded these results. Here we offer a concise synopsis of the different cases, as described by the respondents. Next, you'll see questions pertaining to the domains that the framework addresses.

Participating businesses and individuals

The companies we surveyed and the people who filled out our surveys are detailed in Table 1. The reason behind keeping respondent names hidden is that they willingly decided to offer information in exchange for anonymity. Who they work for, what they do there, and how big the company is are all essential details.

Table.1: Denotes Target Companies and Respondents

Designation	CompanyName	Sizeof Firm
CRM Manager	Rusta (Sweden)	Large
CMO/Co-founder	Refunder	Small Medium Enterprise
MarketingManager	IEWA	Small Medium Enterprise

- Businesses and Individuals Were Evaluated in Table.1.
- Name of the Company: Firm Size
- Relationship Manager at Rusta (Sweden) - Big
- Co-founder and chief marketing officer: SME fundraiser.

Small and Medium Enterprise Marketing Manager at IEWA

Company profiles of Rusta

Rusta opened its first store in Gävle in 1986. Major owners Anders Forsgren and Bengt-Olov Forssell are very involved with the company's day-to-day running. Rusta's business model is based on providing customers with the easiest way to buy the highest quality home and leisure products at the most competitive prices. If you're looking to spruce up the inside or outside of your home, they have a wide selection of seasonal products, home decor, leisure, do-it-yourself, and consumables. Rusta promotes a number of its own brands in addition to popular names from around the world.

The core idea behind the business is to cut out the middlemen and provide customers with easy buying methods. Being their own wholesaler, distributor, retailer, and importer, Rusta works with a diverse group of efficient logistical partners.

Return Processor

Refunder, founded in 2014, is a cashback platform based in Sweden. The cashback site's business plan is as follows: Refunder is a member site that has links to several e-commerce sites. When members make purchases using these links, the cashback site receives a commission. Members get a cut of the profits made by the cashback website whenever they shop. Customer gets their money back for their purchases, and refunder, the cashback site, keeps part of it. So far, this provision has been Refunder's only income generator. Basically, it's a low-margin, volume-based business model that becomes better as the order volume gets bigger. The number of Swedish Refunder members is currently above 500,000 and rising.

Two significant performance factors are highlighted by Refunders' chief marketing officer and co-founder.

The following are listed:

- The Price of Gaining a Member and

The Cost of Acquiring Customers

If the price of joining Refunder is too high or if members don't buy anything through the service, it will not be able to stay in business. On top of that, there are a bunch of different ways for Refunder users to get their money back. With an annual revenue of roughly 1.2 billion SEK, more than a thousand e-commerce firms in Sweden have seen an increase in provision and sales thanks to Refunder's regular execution of various campaigns in conjunction with various e-commerce organizations. In order to tailor their marketing campaigns, Refunder depends significantly on AI.

International Education & Work Abroad Consultants (IEWA) is a Pakistani firm with a Canadian branch that offers immigration and student help. The organization's reputation rests on the expertise of its career counselors, who assist students and professionals from around the globe in making the move to countries offering the most promising prospects for professional development.

After launching in 2016, IEWA has grown its footprint in many European, Eastern, and Western nations. The company has grown to employ around 50 individuals and has formed partnerships with similar groups all across the world. IEWA is a service-based business that uses customer relationship management (CRM) extensively to keep in touch with current and potential customers and business associates.

Interview goals and methods

Three managers from different companies were interviewed. Two were product-based and one was a service provider; all three were business-to-consumer companies. After some preliminary communication by phone and email, online interviews were set up.

In this research, we employed the deliberate sampling method. Finding individuals with deep expertise in a certain field is the main goal of this method. We aimed to collect as much reliable data as we could with the time and resources we had, therefore this is crucial to our research. In addition, our carefully crafted questionnaire questions would be rendered useless in the event that the responders lacked sufficient expertise. We used our existing relationships in Sweden and abroad, as well as those we met while conducting research, to locate informed persons who were willing to give us interviews.

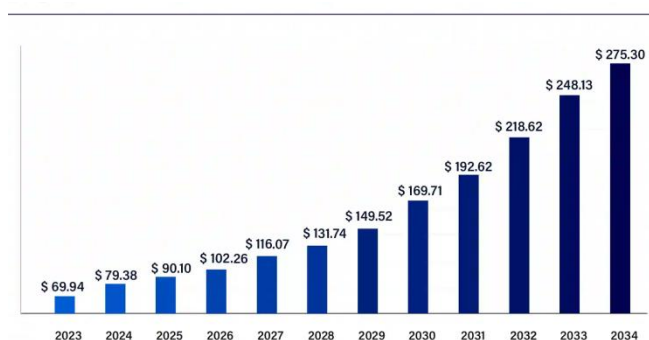


Fig.2: Depicts CRM market size 2023 to 2034.

Daraz (owned by Alibaba.com) and Telemart are two more business-to-consumer companies in Pakistan that we attempted to set up interviews with. These companies are widely recognized as the leading online marketplaces across Pakistan. Companies declined to participate in interviews due to privacy concerns, which is disappointing. Nevertheless, we were fortunate enough to secure an interview with IEWA via a reference. It was educational to discover that CRM is utilized for a multitude of purposes within the organization, including data collecting, lead creation, task assignment, contact with current and potential clients, and more. According to IEWA's marketing manager, the team uses Bitrix CRM and Zoho Projects for a lot of different things, including sales forecasting, keeping tabs on the progress of client processes, and establishing reaction times.

Assessment Center

We had to carefully craft the research questions whose answers would help us achieve our goal if we wanted to get the right data. This was accomplished by repeatedly asking "what we needed to know" while we crafted these semistructured interview questions. Questions such as "Do you see AI as an opportunity or a threat to your role as a manager?" and "What are the relevant aspects and applications of AI-integrated CRM in your company's marketing/sales functions?" let us know our assumptions were correct."need responses from experts who could impart wisdom gleaned from personal encounters.

V. CONCLUSION AND FUTURE DIRECTION

AI will change marketing managers and customer relationship management (CRM), according to our research. AI has altered how companies communicate with potential customers. AI-powered marketing methods enable massive data collection and analysis of complicated trends. Machine learning and deep learning algorithms help store more potential clients efficiently. Customers have full control over the machine, allowing them to segment the market by demographics, find the right target, and choose the best marketing plan. Marketing managers can now estimate investment and action results to boost sales, profitability, brand loyalty, and client retention. AI provides marketers with extensive client data and data analysis methods to identify consumer preferences and needs. Marketing campaigns depend on these factors.

To use AI in marketing, managers need extensive marketing expertise and strong analytical and technical skills. This must be considered when choosing. Without managers knowing how to maximize AI technologies, the expected benefits for the firm would remain difficult to accomplish as AI improves. Managers without AI competence will lag behind in innovation rather than market share. Marketing manager abilities and competence have changed significantly. Professional possibilities improve with strong analytical and technological skills.

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