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A Study on Artificial Intelligence in Customer Relationship Management with Special Reference to MSMEs Sector, Coimbatore

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ABSTRACT: Customer Relationship Management (CRM) system is the traditional system that assists a business in understanding the customer and fulfilling their expectations. But due to the high development in the technology, and the Artificial Intelligence (AI) especially, the CRM practices are now changing massively. Ultimately AI-driven CRM solutions help organizations to process massive amounts of customer data, automate their communication, and offer highly personalized experiences and that in turn contributes to greater customer satisfaction and improved customer loyalty. The objective of the study is to analyse the Artificial Intelligence in Customer Relationship Management With Special Reference To MSMEs Sector, Coimbatore. The sample of the study is 120. Descriptive research design and convenience sampling method has been used in the study. Questionnaire has been used as a primary data. Simple percentage analysis, chi-square analysis and correlation statistical tools have been applied to reach the findings of the study. It is found that there is no significant relationship between age of the respondents and respondents' opinion on responsiveness. There is negative and no significant relationship between experience of the respondents and organizational support for AI integration. It is suggested that demonstrating the capability of AI and its contribution to better customer relationship management, the business should at all costs encourage and endorse the usage of AI products. To enhance customer satisfaction rates and customer retention levels, the company has to develop AI-powered CRM methods continuously. It is concluded that study highlights the necessity of strategic design which integrates the technological development with the organizational preparation to bring about improved relationships between customers and a prolonged growth in the business competitive world.

KEYWORDS: Artificial Intelligence, Customer relationship management, MSME sector, AI driven.

I. INTRODUCTION

In the current highly competitive business world, establishment and sustenance of good customer relationships have become a key success factor especially within the Micro, Small and Medium Enterprises (MSMEs). Customer Relationship Management (CRM) system is the traditional system that assists a business in understanding the customer and fulfilling their expectations. But due to the high development in the technology, and the Artificial Intelligence (AI) especially, the CRM practices are now changing massively. Ultimately AI-driven CRM solutions help organizations to process massive amounts of customer data, automate their communication, and offer highly personalized experiences and that in turn contributes to greater customer satisfaction and improved customer loyalty.

Coimbatore is a city with a thriving industrial sector and entrepreneurship culture and MSMEs operating in this city are slowly realizing that they cannot survive without incorporating modern technologies. Nevertheless, the aspect of AI in CRM is distinct in that these businesses do not have enough resources to manage and have different styles of technological preparedness. This can be one crucial determinant of the readiness of MSMEs to embrace and successfully deploy AI tools since adoption is largely based on the perceived ease of use. Use of AI tools that are convenient and easy to use can be of great benefit in CRM when they can greatly simplify CRM work, spur decision-making, and speed up the time in responding to customer requests and feedback.

Additionally, the effectual use of AI is based on the quality of the customer data available to the CRM systems that facilitate their accessibility. Proper, well-detailed, and up-to-the-minute data enables the AI algorithm to deliver insights that translate into actionable trends, predictions of how to reach customers and proactive approaches to engage them. Nonetheless, a significant number of MSMEs have been experiencing issues connected to uneven data systems and weak data management ability, which can even play a negative role in the AI application potential.

The support within an organization is very significant in promoting the use of AI-driven CRM strategy. Resistance to change has to be countered using support, which includes proper training, infrastructure and commitment on the part of

the leadership to bring a culture of innovation. Even the most advanced AI tools can fail to provide the necessary results without the solid support of the management and stakeholders.

Customer retention is one of the main indicators of CRM success. Incorporating AI-based CRM strategies, MSMEs can gain better insights into customer behavior, predict their needs, and provide them with personal offers, which will increase their loyalty and long-term relations. With greater retention not only will there be longer revenue growth but there will be a better market position of the MSMEs as well.

This paper thus intends to delve through these aspects in detail having chosen the sector of MSME in Coimbatore. It will help to find valuable clues to the possibility of the effective introduction of AI into CRM practice in order to achieve more positive business results and initiate long-term relationships of the company with customers.

Statement of the problem

Customer relationship and competitive advantage have become top priorities of the MSMEs in the fast developing business environment in Coimbatore. Although Artificial Intelligence (AI) emerged as one of the relevant tools that help to strengthen Customer Relationship Management (CRM), its utilization is low and very uneven in MSMEs. Most companies do not know how to use and comprehend AI tools because of technological complexity, resource limits and in-expertise. Also, data quality and access concerns are impeding AI systems in providing truthful knowledge and individualized customer experience. Infrastructural and training facilities as well as organization of subjects are usually inappropriate, which results in resistance and inefficient implementation. It is important that to allow staff to accept AI tools, the ease of use perceived should be influential. Some of the MSMEs do not achieve the desired results despite the potential of the AI method of the CRM approaches that can enhance customer retention. This fact opens a big gap between the possibilities created by technologies and their reality. It will therefore be imperative to learn how AI may effectively be used in the process of CRM to enable MSMEs in Coimbatore to acquire long term growth and sustainable relationships with customers.

Objectives

- To understand the Perceived Ease of Use of AI Tools in enhancing customer relationship management processes in the MSMEs industry
- To evaluate the quality and accessibility of customer data within CRM systems in the MSMEs industry
- To analyze the level of organizational support provided for the integration of AI tools for CRM in the MSMEs industry
- To assess the influence of AI-driven CRM strategies on customer retention rate in the MSMEs industry

II. REVIEW OF LITERATURE

Kumar and Sharma (2023) undertook a study to understand a similar aspect of how the Indian MSMEs have adopted the AI-enabled CRM tools and the results measured that the ease of use is a factor that influences technology acceptance to a great extent. The fact that most of the MSMEs have limited technical skills that is a hindrance to their ability to utilize efficiently features of AI was brought out in the research. Additionally, companies, which engaged in employee training, experienced greater adoption rates and more positive CRM results. The paper noted the ease of use by interfaces as a motivator of adoption. It also observed that the insights by using AI significantly boosted customer segmentation as well as targeting. In that way, ease of use became an essential element of the competitiveness of the MSMEs.

Patel, Reddy (2024) undertook a research study to understand how the quality of data can determine the effectiveness of AI-based CRM to small businesses. Their results indicated that the lack of overall data accurateness and customer records did not allow AI applications to produce insights that could be applied. The research also indicated that those MSMEs by which data management practices were strong had a higher level of customer satisfaction. Ability to access data emerged as one of the important factors in terms of personalized marketing and delivery of services. The study highlighted that there should be a strategic investment in data infrastructure to take full advantage of what AI has to offer. This pinpoints the significance of the data quality as a basis of successful AI-CRM integration.

Nair and Joseph (2025) outline that organizational aid is an important determinant of successful implementation of AI in CRM among the MSMEs. This is because their study revealed that commitment of management and employee training programs play a big role in the effectiveness of AI application. Firms that had substantial support of infrastructures experienced easier shifts to AI-centred systems. Besides, the study indicated positive relationship between customer retention levels and organizational support. The feeling of support and proper training made

employees more likely to accept AI tools. This reiterates the need of having leadership participation towards the issue of technological change.

III. RESEARCH METHODOLOGY

This paper is going to examine the role and influence of Artificial Intelligence in Customer Relationship Management (CRM) with a special reference to the MSME sector in Coimbatore. To attain the goals of the research, primary and secondary form of data collection was utilized. The main data was taken directly by making inquiries to the respondents through an effective structured questionnaire to get the views, experience, and indications of the respondents on the use of AI within CRM processes. The locations of the secondary data were reviewed and extracted; some of them include academic journals, research reports, company records, industry publications, and pertinent articles, which had the information with regard to the AI implementation and CRM applications in MSMEs.

The study established that the sample size of the study is 120 respondents owners, managers, and employees who were involved in the CRM activities in the SMEs of Coimbatore. Convenience sampling method has been used to obtain respondents because it was easy to get the participants considering the fact that they were simply available and ready to tell their story.

The research design based on a descriptive approach was employed to describe the extent of the current situation with the use of AI in CRM as well as evaluate the connections between the various variables discovered in the research. The study findings have been arrived at after using Chi square analysis and correlation analysis.

IV. DATA ANALYSIS AND INTERPRETATION

Table 1: Demographic analysis

Respondents Gender	Frequency	Percent
Male	80	66.7
Female	40	33.3
Total	120	100.0
Respondents Age	Frequency	Percent
Below 25	25	20.8
26-35	51	42.5
36-45	21	17.5
Above 50	22	19.2
Total	120	100.0
Education	Frequency	Percent
Upto HSC	22	18.3
UG	17	14.2
PG	23	19.2
Diploma & others	58	48.3
Total	120	100.0
Experience	Frequency	Percent
Below 1 Year	51	42.5
1-3 Years	69	57.5
Total	120	100.0

Interpretation:

The above table shows that 66.7% of the respondents are male, 42.5% of the respondents are in the age group of 26-35, 48.3% of the respondents have completed diploma & others and 57.5% of the respondents said that 1-3 years as their experience.

Table 2: Chi-Square Analysis

Relationship Between Educational Qualification Of The Respondents And Respondents' Opinion On Perceived Ease Of Use Of AI Tools

HYPOTHESIS TESTING

Null hypothesis (H0): There is no significant relationship between age of the respondents and respondents' opinion on responsiveness

Alternative hypothesis (H1): There is some significant relationship between age of the respondents and respondents' opinion on responsiveness.

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	54.181 ^a	56	.544
Likelihood Ratio	62.939	56	.244
Linear-by-Linear Association	4.918	1	.027
N of Valid Cases	120		
a. 73 cells (97.3%) have expected count less than 5. The minimum expected count is .14.			

Interpretation:

As per the above table, it is inferred that the P value is 0.544; it is not significant to 5% (0.05) significant level. The minimum expected count is .14. Thus null hypothesis is accepted and it is found that there is no significant relationship between age of the respondents and respondents' opinion on responsiveness.

Table 3: Correlation Analysis

Relationship Between Experience Of The Respondents And Respondents' Opinion On Organizational Support For AI Integration

Null hypothesis (H0): There is no significant relationship between experience of the respondents and organizational support for AI integration

Alternative hypothesis (H1): There is no significant relationship between experience of the respondents and organizational support for AI integration

Correlations			
		EXPERIENCE OF THE RESPONDENTS	ORGANIZATIONAL SUPPORT FOR AI INTEGRATION
EXPERIENCE OF THE RESPONDENTS	Pearson Correlation	1	-.211*
	Sig. (2-tailed)		.021
	N	120	120
ORGANIZATIONAL SUPPORT	Pearson Correlation	-.211*	1

FOR AI INTEGRATION	Sig. (2-tailed)	.021	
	N	120	120

Interpretation

The table presents the correlation between two variables: "Experience of the respondents" and "Organizational support for AI integration". The Pearson Correlation coefficient between these two variables is -0.211, with a significance value (Sig. 2-tailed) of 0.021. At a 0.05 significance level, the p-value (0.021) is less than 0.05, indicating that the correlation is not statistically significant. Therefore, we can conclude that there is negative and **no significant relationship** between experience of the respondents and organizational support for AI integration.

Recommendations

- To make the system more user friendly, the business must consider simplifying the user interface of the AI-powered CRM features even further.
- The company should focus on the comfort of its employees by ensuring the AI tools are developed with minimal efforts.
- The company should invest in developing AI to make it user-friendly to employees who have varying levels of technical skills.
- The information about the instruction and support of the AI technologies in the CRM system should be updated in order to make it more legible.
- The business must have training programs, which focus on aiding the staffs on timely changes in adaptation to an AI tool or an improvement of it.
- The company would be advantaged by its convenient access to all the necessary client data through the AI-enabled CRM-solution.
- The company should support some data reliability and accuracy principles of the CRM supported by AI.
- To ensure that the AI systems keep delivering the right and extensive information about consumers, the company ought to establish regular inspections.
- The business should scale up the ability of the CRM system to merge information in numerous sources and enable easier access by the users.
- The business should ensure that AI technologies constantly supply current data that are relevant in order to ensure effectiveness of interactions with consumers.
- The company should be focused on the provision of sufficient training programs among the staff members to enhance their competence with regard to using AI technologies in the context of CRM.
- The company should ensure the availability of continuous support to the staff to improve the use of AI technologies within CRM.
- To achieve optimal CRM, the company should constantly update its AI landscapes that will help keep the company in line with technological discoveries.
- The company ought to allocate money to the technology, the software, and other employees towards a successful integration of AI processes in the CRM business.
- Demonstrating the capability of AI and its contribution to better customer relationship management, the business should at all costs encourage and endorse the usage of AI products.
- The company needs to enhance its AI technologies in order to identify risky clients and offer them solutions to prevent attrition of customers.
- To enhance customer satisfaction rates and customer retention levels, the company has to develop AI-powered CRM methods continuously.
- To make the client retention even better, the company needs to apply AI-powered insights to respond to consumer concerns at a faster rate.
- The firm ought to focus on leveraging the AI-derived insights in order to develop more stable and sustainable relationships with the most valuable clients.
- To ensure the delivery of personalised interactions that will lead to client loyalty and long-term retention, the company will need to maximise the use of AI-enabled CRM.

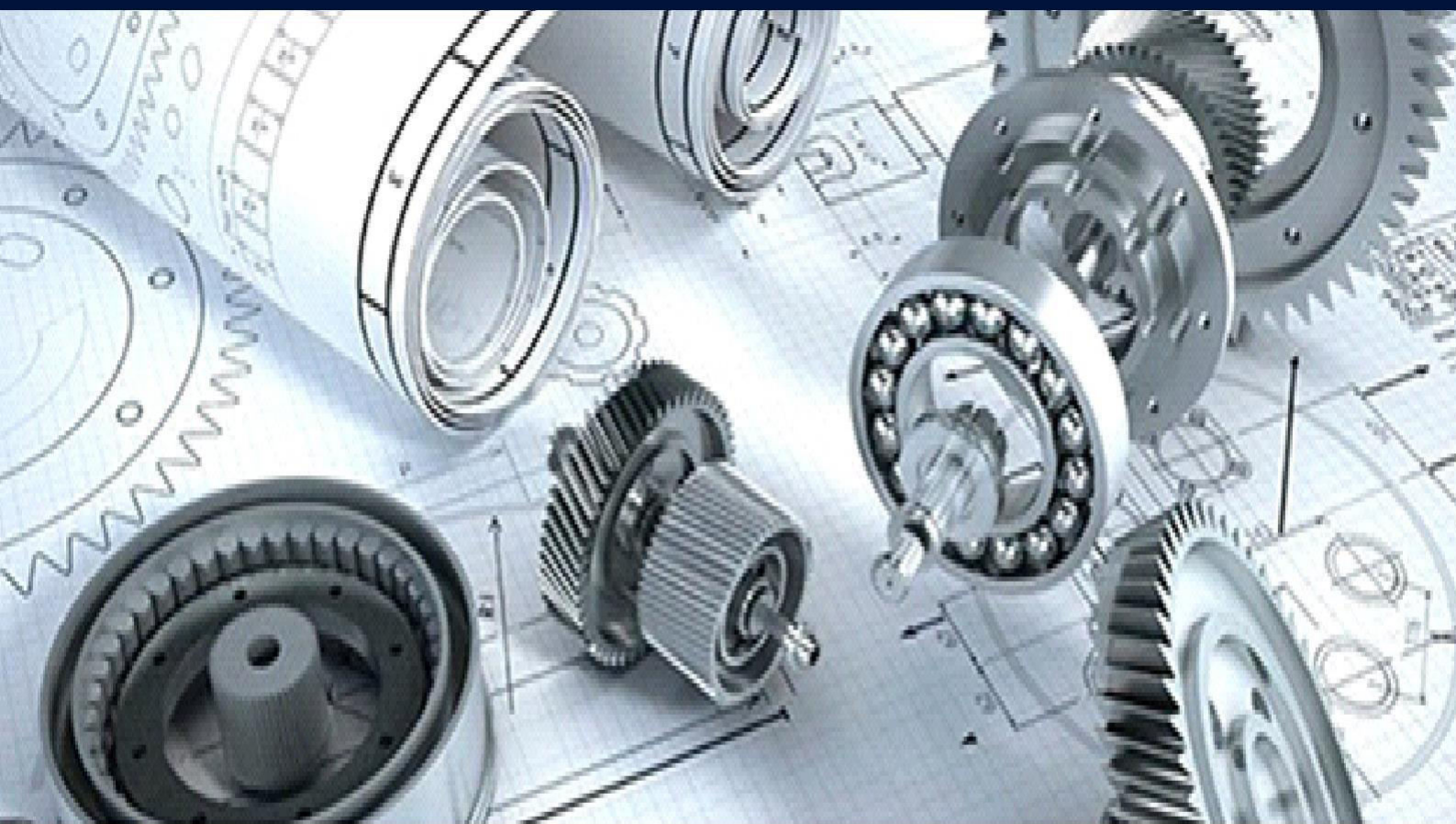
V. CONCLUSION

The research paper on Artificial Intelligence in Customer Relationship Management (CRM) with special consideration to MSME sector in Coimbatore reflects the increased importance of incorporating the futuristic technologies to improve customer relationship and retention. Its results indicate that the use of AI tools can have an enormous potential to automate and facilitate the working process of CRM and guarantee each customer a personalized experience; however,

many factors can define the success of the application. The usability of the AI tools is crucial to promote their usage by MSMEs, and the quality and the availability of the data on customers is a critical factor to collecting and planning respectively. Also, to deal with resistance and promote successful integration, the robust organizational support is required, which involves leadership commitment and sufficient training. The research also verifies that AI based CRM strategies positively influence the establishment of the customer retention levels, thus to the business sustainability in the long run. Nevertheless, MSMEs are supposed to overcome issues concerning information management and technological preparedness to take full advantage of AI. On the whole, the study highlights the necessity of strategic design which integrates the technological development with the organizational preparation to bring about improved relationships between customers and a prolonged growth in the business competitive world.

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