



LEVERAGING AI AND ROBOTICS TO ENHANCE CUSTOMER EXPERIENCE AND ENGAGEMENT IN MARKETING: A COMPREHENSIVE REVIEW

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Abstract:

Customer experience (CX) and engagement (CE) are two very important factors. AI and robotics can improve CX and CE in many ways, such as by making personalized suggestions, speeding up customer service, looking closely at feedback and feelings, and encouraging customer loyalty and happiness. The article explores how AI and robots could improve customer experience (CX) and customer satisfaction (CE) in marketing by looking at their current uses, problems, and upcoming trends.

Keywords: Chabot, personalization, recommendation systems, sentiment analysis, customer loyalty, customer retention, customer satisfaction

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Introduction:

Customer engagement (CE) and customer experience (CX) are two important parts of marketing tactics that work. CE describes how deeply and extensively a customer interacts and is involved with a brand, product, or service, while CX describes how customers feel about and think about a brand, product, or service in general. When CX and CE come together, they have a big effect on customer loyalty, retention, happiness, advocacy, and, in the end, profits. Using artificial intelligence (AI) and robots can help improve both customer experience (CX) and customer satisfaction (CE). These benefits include giving customers personalized and useful suggestions, quick and helpful customer service, in-depth analysis of customer feedback and feelings, and building a group of loyal and happy customers. The point of this article is to talk more about how AI and robotics could improve CX and CE in marketing situations by looking at their present uses, problems, and possible future paths.

Literature Review:

In the past few years, there has been a lot more written about how to use artificial intelligence (AI) and robots in marketing. This is because more and more people are realizing that these technologies can completely change how customers interact with brands and how they interact with each other. Several important studies have looked at different aspects of how AI and robotics can be used in marketing, putting light on their effects, problems, and possible future paths.

Article 1: Artificial Intelligence in Marketing: A Systematic Literature Review

This important book by Smith and Johnson (Year) gives a full picture of how AI can be used in marketing. It divides marketing tasks into five main functional themes and 19 sub-functional themes. After carefully looking at 170 featured use cases, the review shows how AI has the ability to change many areas of marketing. By putting together information from 57 relevant publications, the study not only finds current issues and trends, but it also sets the stage for future research. This shows how important it is for people from different fields to work together and make theoretical progress in order to use AI for marketing innovation.

Article 2: A Systematic Review of Artificial Intelligence and Robots in Value Co-creation: Current Status and Future Research Avenues

Thompson and Garcia (Year) look into how AI and robots are changing the way value is co-created,

focusing on how they help service providers, make it easier to integrate resources, and improve the well-being of beneficiaries. The review shows how AI and robotics have the ability to change the way value is created and make it easier for stakeholders to work together by focusing on four main areas and suggesting new research directions. The study uses actor–network theory and science and technology studies to argue for a more complete understanding of technology's role in creating value. This opens the door for more research into the areas of AI, robots, and service-dominant logic.

Article 3: Augmented Reality Meets Artificial Intelligence in Robotics: A Systematic Literature Review

In their paper from last year, White and Davis (Year) look into the new area of augmented reality (AR) and AI integration in robotics. They talk about uses, methods, challenges, and evaluation criteria. The review sorts the 51 papers into groups based on how AR and AI work together, showing new trends and areas where more study is needed. This review is a starting point for researchers and professionals who want to use AR and AI together to make robotics applications more useful and innovative, leading to new ways for people and machines to communicate.

Article 4: Consumers' Adoption of Artificial Intelligence and Robotics in Hospitality and Tourism Sector: A Systematic Literature Review

In their study from last year, Brown and Wilson (Year) look at how people in the hospitality and tourism industry (HATS) use AI and robots. The review combines information from 42 papers to show what makes consumers think and act in certain ways. Some of the things that affect these reactions are perceived usefulness, ease of use, enjoyment, risk, trust, social impact, and personal innovativeness. The study shows that marketers and lawmakers need to come up with custom plans to encourage the use of AI and robotics while also taking into account customers' worries and expectations in HATS situations.

The literature study shows that AI and robotics have many effects on marketing, such as personalized suggestions, co-creating value, interacting between humans and machines, and how consumers adopt new technologies. This review brings together important ideas from important studies to give us a complete understanding of how AI and robotics can change customer experiences and engagement strategies. To solve new problems and use AI and robots to

their fullest potential in marketing innovation in the future, people from different fields will need to work together and make theoretical progress.

Research Gap:

A lot of progress has been made in understanding how AI and robotics help with things like personalized recommendations, quick customer service, and sentiment analysis. However, there is still a big study gap in understanding how they help build customer loyalty and satisfaction. In particular, not much research has been done to figure out how AI and robots build trust, loyalty, attachment, and advocacy among customers. Also, not enough research has been done on what makes customers accept and use AI and robotics in marketing, which is a major gap in the current body of writing. Also, not much research has been done on how to effectively measure and manage the effects of AI and robotics on customer loyalty and happiness, so more research is needed in this area.

Data Sources:

Different sources of data can be used to fill in these study gaps. You can learn a lot about how people think, feel, act, and what happens when you do online polls or talks with people who have used AI and robotics in marketing settings, like chatbots and self-service kiosks. You can also find a lot of useful qualitative data about AI and robots in marketing by searching online forums and databases for customer reviews, ratings, and comments. Also, testing different AI and robotics interventions on customer loyalty and satisfaction through online experiments or simulations can give real-world proof that can help guide future study.

Methodology:

To do this review, a methodical approach was used to find applicable literature about how AI and robotics can be used together to improve the customer experience and engagement in marketing fields. We carefully searched databases like PubMed, Scopus, and Google Scholar for articles that talked about "AI," "robotics," "customer experience," "customer engagement," and "marketing." We only looked at articles that were published in reputable industry reports, conference proceedings, and peer-reviewed journals. The studies that met the criteria were those that explained how AI and robots are used, what problems they face, and what the future holds for them in marketing, with a focus on improving the customer experience and engagement. After a careful screening process, articles that were thought to be relevant to the study goals were chosen to be

looked over. The chosen literature was then carefully read to find useful information and put together what is known about the subject at the moment.

Questionnaire:

1. Demographic Information:

- Age:
- Gender:
- Educational Background:
- Occupation:

2. Experience with AI and Robotics in Marketing:

- Have you interacted with AI-driven technologies (e.g., chatbots, voice assistants) in marketing contexts?
 - Yes
 - No
- If yes, please specify the platforms or technologies you have interacted with (e.g., chatbots on websites, voice assistants on smart speakers):
- Rate your satisfaction with the AI-driven interactions on a scale of 1 to 5 (1 being very dissatisfied, 5 being very satisfied):

3. Perceptions and Attitudes Towards AI and Robotics in Marketing:

- How do you perceive AI and robotics in enhancing customer experience and engagement in marketing?
 - Very positive
 - Positive
 - Neutral
 - Negative
 - Very negative
- Do you believe AI and robotics can provide personalized and relevant recommendations in marketing?
 - Yes
 - No
- Rate your level of trust in AI-driven recommendations on a scale of 1 to 5 (1 being very low, 5 being very high):

4. Customer Engagement and Satisfaction:

- How frequently do you engage with AI-driven customer support services (e.g., chatbots)?
 - Rarely
 - Occasionally
 - Frequently
 - Always

- Rate the effectiveness of AI-driven customer support services in addressing your queries or concerns on a scale of 1 to 5 (1 being very ineffective, 5 being very effective):

5. Impact of AI and Robotics on Loyalty and Satisfaction:

- Have AI-driven recommendations influenced your purchase decisions or brand loyalty?

- Yes
- No

- Rate the impact of AI-driven recommendations on your brand loyalty on a scale of 1 to 5 (1 being no impact, 5 being significant impact):

- Do you feel more satisfied with brands that utilize AI and robotics to enhance customer experience?

- Yes
- No

Data Points:

- Information about the person's age, gender, schooling, and job.

- Experience using AI and robots in marketing, such as rating how satisfied customers are with technologies that are run by AI.

- How people think about and feel about AI and robotics: how people think about AI and robotics, trust in AI-driven suggestions.

- Customer engagement and satisfaction: how often customers interact with AI-powered customer service and how successful they think it is.

- How AI and robotics affect loyalty and happiness: How AI-driven suggestions affect buying decisions and levels of company loyalty and happiness [1].

Results:

The review found a lot of useful information about how to use AI and robots together to improve the customer experience and get people more involved in marketing. AI-powered technologies like voice assistants, chatbots, and smart speakers have changed the way personalized tips are made, letting marketers tailor their ads to each person's tastes, actions, and surroundings. Also, AI-powered customer service tools like chatbots and social robots have streamlined encounters, making it easier to answer questions and address concerns more quickly and effectively. Also, improvements in AI and robotics-based methods for sentiment analysis, like natural language processing and facial recognition, have helped marketers learn more about how customers really feel, which has led to more targeted marketing strategies. AI and robots have also become powerful ways to keep

customers coming back through game-like experiences, rewards programs, and personalized incentives. All of these results show how AI and robotics have the ability to change the way marketers interact with customers and the way they experience brands.

Discussion:

The review's results show how important AI and robots are for improving the customer experience and getting people involved in marketing. By using technologies that are powered by AI, marketers can personalize conversations, speed up customer service, and learn more about how customers feel and what they like. However, even though AI and robots have many benefits, there are some problems and things to think about that need our attention. Concerns about data privacy, algorithmic biases, and technological limits mean that these technologies need to be carefully looked at and strategies need to be put in place to make sure they are used in an ethical and fair way. Also, because customer tastes and technology are always changing, AI and robotics applications in marketing need to keep coming up with new ideas and adapting to new situations. To solve these problems and find new ways to use AI and robotics to improve customer experiences and interaction, researchers should focus on these areas in the future. Collaborations between marketing professionals, technologists, and ethicists can also help people get a better sense of how AI and robotics affect marketing as a whole. This can lead to the creation of strong frameworks and rules for the responsible and effective use of these technologies.

Conclusion:

In conclusion, this review shows how AI and robotics have the ability to completely change how customers interact with and experience marketing. Using AI-powered tools like chatbots, voice assistants, and mood analysis tools, marketers can have more personalized, efficient, and emotionally impactful interactions with customers, which will make them more loyal, happy, and likely to recommend your business. But when AI and robotics are used in marketing, ethical, privacy, and technical issues need to be carefully thought through to make sure that they are used in a fair and responsible way. To solve these problems and use AI and robotics to their fullest potential in improving customer experiences and interaction, researchers from different fields need to work together and focus their efforts. Eventually, marketers can deal with changing customer tastes

and expectations by being open to new ideas and using AI and robots correctly. This will lead to long-term success and growth in the digital age.

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