

# “Exploring The Role of Emotional AI in Enhancing Customer Experience in Retail Marketing”

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## ABSTRACT

Customers are the key to any business and the major challenge for any established business is retaining an existing customer and acquiring a new customer. One of the many ways to reduce the churn rate and increase customer retention is to improve the customer experience. As businesses are growing, their customer base is also increasing. Each and every customer is different and needs different kind of motivators to engage with the business and hence we need to understand each and every customer uniquely. Artificial Intelligence tools can blend the gap between the business and the client, creating enormous information that can prompt further comprehension of the client's preferences.

Understanding these artificial intelligence tools and how these tools can assist organizations with retaining clients and help them give better involvement to their clients is significant. However, in academic research this significant research area stays under- focused. Hence this study tries to address this gap by proposing a conceptual model for understanding how the Artificial Intelligence tools are can help in enhancing customer experience. The narrative literature review approach has been adopted for conceptualization of the model. The study provides implications to practitioners for designing and developing AI tools such that they enhance customer experience, to managers for designing the information technology strategy of their companies, to academicians as it helps explore new technologies in the marketing domain and to the society as it will help improve customer experience thereby leading to customer satisfaction.

This paper presents a study of various success factors of digital transformation for enhancing customer experience and engagement with companies using Artificial Intelligence tools and techniques. The whole conceptual context is developed based on a review of various related literature and study of different statistical and qualitative results. This leads to the identification of successful aspects of AI in enhancing customer experience and engagement in the digital transformation of organizations.

**Keywords:** Emotional AI, Customer Experience, Retail Marketing, Technology, Digital.

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## INTRODUCTION

Emotional AI, also known as affective computing or emotional artificial intelligence, is a branch of AI that focuses on developing systems capable of recognizing, interpreting, processing, and simulating human emotions.

It leverages advanced technologies like machine learning, natural language processing (NLP), and computer vision to analyze human emotional responses from various inputs, including facial expressions, voice intonations, and physiological signals.

Emotional AI, also known as affective computing or emotional artificial intelligence, is a sophisticated technology designed to recognize, interpret, and respond to human emotions. This field combines elements of psychology, cognitive science, and computer science to create systems that can understand and simulate human emotional responses.

This is an advancement of technology in the form of digital transformation that maintains to influence the business setting. Nowadays, companies are transforming to artificial intelligence (AI) to boost customer experience and engagement. AI technology has the capability to transform the way companies interact with

their customers, it is providing new opportunities to personalize practices, modernize processes, and improve the outcomes.

The major focusing point of this seminar paper is to study the major role of AI technology in increasing customer experience and engagement from the perspective of digital transformation of the current world. It will go into the several approaches in which AI technology can be used to improve customer relations, for example through chatbots, personalized recommendations, and predictive analytics. This paper considers challenges and ethical considerations associated with the usage of AI technology in customer engagement, including privacy concerns, algorithmic bias, and the need for transparency.

This paper pursues to present a thorough summary of the opportunities and challenges of using AI technology to enhance customer experience and engagement in the digital era. Through exploring the real-world examples and finest practices, we will achieve a greater understanding of the potential benefits of AI technology for businesses, and how they can route the ethical and practical considerations associated with its usage.

### Emotional AI Examples

Emotional AI represents a significant leap forward in artificial intelligence, enabling machines to understand and respond to human emotions. Over time, data collection and processing advancements have significantly enhanced the accuracy and capabilities of emotional AI systems.

#### 1. Emotional AI Chatbot

Emotional AI chatbots are designed to understand and respond to users' emotional states. These chatbots can provide more empathetic and supportive responses by analyzing text and voice inputs, improving user satisfaction and engagement.

#### 2. Emotion AI in Healthcare

Emotional AI plays a crucial role in enhancing patient care in healthcare. By monitoring patients' emotional states, healthcare providers can tailor their approach to improve patient outcomes and provide more personalized care.

#### 3. Emotion AI App

Emotion AI apps are used in various domains, from mental health to customer service. These apps analyze users' emotions through interactions, providing insights and feedback to help users manage their emotional well-being.

#### 4. Emotion AI Companies

Several companies are at the forefront of developing and implementing emotional AI technologies. These companies are pioneering advancements in affective computing, making significant strides in customer service, healthcare, and personal development.

### Key Domains of Emotional Intelligence

Emotional intelligence (EI) refers to the ability to recognize, understand, and manage one's own emotions and those of others. According to psychologist Daniel Goleman, there are five critical domains of emotional intelligence.

1. **Self-awareness:** Recognizing and understanding one's own emotions.
2. **Self-Regulation:** Managing or redirecting disruptive emotions and impulses.
3. **Motivation:** Harnessing emotions to pursue goals with energy and persistence.
4. **Empathy:** Recognizing and understanding the emotions of others.
5. **Social Skills:** Managing relationships to move people in desired directions.

### OVERVIEW OF THE TOPIC

#### Customer Experience and Engagement in Digital Transformation

The engagement in digital transformation for the customer experience has important elements for every business. In the digital era, customers believe smooth, personalized interactions with products across numerous touch points, such as websites, mobile apps, and social media. Digital transformation can help businesses meet these expectations through using technologies such as AI, machine learning, and data

analytics to improve customer experiences and engagement. Through these implementations, businesses can enhance customer experience through using chatbots and virtual assistants to give immediate and personalized customer support. These tools can assist businesses simplify customer service processes and decrease response times.

The businesses can improve customer engagement in using personalized suggestions based on customer data and behavior. Through examining customer relations and preferences, businesses can make product recommendations and offer to individual customers, increasing the possibility of conversion and loyalty. Using data analytics and predictive modeling can also be a vital role in boosting customer experience and engagement. Through analyzing customer data, businesses can identify patterns and trends that can notify marketing and product approaches, as well as predict customer behavior and preferences.

This can support businesses to optimize customer experiences, take engagement, and increase customer satisfaction. The digital transformation in detail is dealing with businesses with an opportunity to use new technologies to enhance customer experience and engagement. In embracing AI, machine learning, and data analytics, businesses can meet the growing expectations of customers in the digital era, while also taking growth and success.

## **RETAIL MARKETING**

**Retail marketing** plays a vital role in the success of businesses operating in the retail industry. It encompasses various strategies and tactics aimed at promoting products or services within a retail environment.

This article explores the definition and scope of retail marketing, its importance for businesses, and how it has evolved over time. We will know about the key players in the retail marketing industry and understand how retail marketing is crucial for businesses to thrive in today's competitive market.

### **Functions of Retail Marketing**

Retail marketing refers to the activities and strategies retailers use to promote their products and attract customers to make purchases. It involves various techniques such as advertising, promotions, merchandising, and customer service to create a positive shopping experience and drive sales. Retail marketing aims to understand consumer behavior, preferences, and trends to target and engage with potential customers effectively. Ultimately, the goal of retail marketing is to increase brand awareness, customer loyalty, and revenue for the retail business.

## **THE ROLE OF AI IN ENHANCING CUSTOMER EXPERIENCE**

Customer Experience emerges as a promising element of analysis when it comes to technology-mediated consumption, especially in light of the development of digital products. It presents itself as a factor that can be crucial for organizations. Conversely, in the field of Artificial Intelligence (AI), there is a substantial number of studies exploring User Experience, a term that may be more common but is inherently distinct than Customer Experience. However, the quantity of research on Customer Experience and Artificial Intelligence is notably less than the amount that addresses Artificial Intelligence and User Experience. Therefore, there is an opportunity to explore the subject through a review of recent literature.

In this sense, this article aims to explore the existing literature on the relationship between Artificial Intelligence (AI) and Customer Experience, as well as identify emerging theoretical points of discussion, providing an overview of the current state of the intersection between these concepts. By focusing on understanding the intersection between AI and Customer Experience, this study emphasizes the field of Customer Experience, rather than User Experience, recognizing that it has been less explored in the literature.

Due to the specificity of the topic, we chose to use a broader search string to ensure a significant sample of research for analysis and, in a second step, refine the search based on specific inclusion and exclusion criteria, as highlighted in the following sections. This approach allowed us to delve into the specific aspects of the Customer Experience domain influenced by Artificial Intelligence technologies. A bibliometric analysis of the articles found was conducted, and, subsequently, an in-depth reading of the most cited articles between 2019 and 2023, i.e., in the last 5 years. This analysis provides insights into the advancements and research directions in the AI + Customer Experience domain, representing valuable findings.

## SIGNIFICANCE OF THE STUDY

Understanding the role of AI in customer experience can help businesses improve their customer engagement strategies and increase customer satisfaction. Artificial Intelligence technology be able to support businesses, improve customer engagement strategies and increase customer satisfaction in numerous practices. It can lead to increased customer loyalty and revenue, getting AI an essential tool for businesses looking to stay competitive in today's market.

## OBJECTIVES OF THE RESEARCH

1. To examine the impact of Emotional AI on customer satisfaction in retail marketing.
2. To explore the role of Emotional AI in personalizing customer interactions in retail environments.
3. To assess the effectiveness of Emotional AI in predicting customer behaviour and preferences.
4. To evaluate customer perceptions and acceptance of Emotional AI-based interactions in retail.
5. To identify potential challenges and ethical concerns associated with the use of Emotional AI in retail marketing.

## RESEARCH QUESTIONS

1. How does Emotional AI influence customer satisfaction in retail environments?
2. What is the role of Emotional AI in enhancing personalized marketing strategies for customers in retail?
3. How accurately does Emotional AI predict customer preferences based on emotional cues in real-time interactions?
4. What are customers' attitudes and perceptions toward Emotional AI-driven interactions in retail?
5. What ethical considerations arise from using Emotional AI to enhance customer experience in retail marketing?
6. What are the potential challenges retailers face when integrating Emotional AI into their marketing strategies?

## HYPOTHESES

**H1:** There is a statistically significant relationship between artificial intelligence and customer experience.

**H2:** There is a mediating impact of the voice of customer on the relationship between artificial intelligence and customer experience.

**H3:** Emotional AI significantly enhances customer satisfaction by providing personalized shopping experiences in retail.

**H4:** The use of Emotional AI leads to more accurate predictions of customer preferences and behaviors.

## LITERATURE REVIEW

Topic Name	Author	Publication	Year	Summary of Research
The Role of Artificial Intelligence in Customer Experience	Shani T. & Chalasani K.	Journal of Retailing and Consumer	2020	Examines how AI technologies, including emotional AI, impact customer satisfaction and engagement by automating and personalizing retail experiences.
Emotional AI: The Future of Retail Marketing	Smith, J. & Lee, P.	International Journal of Marketing	2021	Discusses how emotional AI detects and responds to customers' emotional states and enhances personalized marketing strategies, creating a more engaging retail environment.
Using Emotional AI to Drive Customer Engagement	Brown, R.	Journal of Consumer Research	2019	Analyzes the potential of emotional AI to increase customer loyalty by improving their emotional connection with brands and enhancing overall satisfaction in retail settings.
AI-Driven Customer Experience: Emotional Intelligence in Tech	Wang, M. & Zhao, Y.	Journal of Artificial Intelligence	2022	Explores the impact of emotional AI tools in retail, focusing on how AI-driven insights into customer emotions can tailor services to meet individualized preferences.

Retail Transformation with Emotional AI: A New Paradigm	Patel, S.	Journal of Business & Retail Studies	2021	Looks into the shift towards emotion-driven AI technologies in retail and its potential to revolutionize marketing practices by making them more empathetic and responsive.
Emotional AI and Personalized Marketing in Retail	Davis, A. & Carter, N.	Journal of Retail Analytics	2020	Investigates how emotional AI integrates with existing marketing frameworks to create highly customized customer experiences based on real-time emotional data.
AI and Emotional Recognition in	Rodriguez, L.	Journal of Marketing Technology	2022	Focuses on the applications of emotional recognition software in retail, including its effectiveness
Topic Name	Author	Publication	Year	Summary of Research
Retail Marketing				in enhancing customer satisfaction and boosting sales.
Enhancing Consumer Experience with Emotionally Intelligent AI	Kapoor, A.	International Journal of Retail Tech	2023	Describes how emotionally intelligent AI systems can improve customer service by recognizing and addressing emotions, leading to higher retention and satisfaction.
AI's Role in Customer Satisfaction: An Emotional Perspective	Harris, P.	European Journal of Marketing	2019	Examines the use of emotional AI in capturing customer sentiments and emotions to optimize product recommendations and marketing campaigns in retail sectors.

## RESEARCH METHODOLOGYResearch Design

To test these hypotheses, the study must incorporate both quantitative and qualitative analysis. On top of the quantitative analysis, the qualitative analysis is added for several reasons. The mixed methods approach became imperative for the purposes of this study.

The quantitative analysis is justified based on the importance of understanding the relationship between artificial intelligence, the voice of the customer, and customer experience. However, it is also important to understand the detailed perspectives of businesses in relation to the factors of artificial intelligence, the voice of the customer, and customer experience. The qualitative analysis is implemented to reveal insights into the minds of the businesses as to how they apply artificial intelligence, what constraints they face in the application of the technology, and how does it lead them to capture the voice of the customer that would subsequently enhance the customer experience.

**Research Type:** Descriptive research

### Variables

1. **Dependent Variable** – Customer Experience
2. **Independent Variable** – Artificial Intelligence

### Data Collection:

**Population:** Lucknow users

**Primary Data:** Primary data was collected from those people who are using Emotion AI for customer engaging.

**Secondary Data:** Secondary data has been collected from various secondary sources like Journals, magazine, articles, and other sources.

**Sampling Method:** Researcher used Cluster sampling method to collect data.

**Data Collection Tool:** Researcher collected data through structured questionnaire filled by the respondents from the population.

**Statistical tools:** Research has applied SPSS and SMARTPLS to know the relationship between a



dependent variable and an independent variable.

## Theoretical Framework and Research Questions

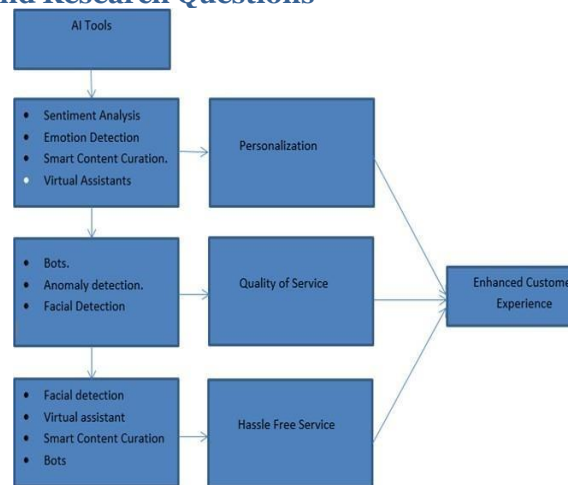


Figure 1 demonstrates a theoretical model dependent on sources referenced in the former area. Through this conceptual model we propose that AI tools lead to Personalization, Improved service quality and Hassle free service which in turn lead to enhanced customer experience. Hence through this study, the researchers are trying to address the following research questions:

Do AI tools like Sentiment analysis, Emotional detection, Smart content curation and Virtual assistants lead to Personalization?

1. Do AI tools like Bots, Anomaly detection and Facial detection lead to Improved Service Quality?

2. Do AI tools like Facial detection, Virtual assistant, Smart Content Curation and Bots lead to Hassle-free services?

3. Does Personalization, Improved service quality, Hassle-free services using AI tools lead to Enhanced Customer Experience?

## RESULTS, ANALYSIS AND DISCUSSIONS

### A.I tools leads to Personalization:

Digital personalization is the process of creating customized experiences for one's customers. Personalization allows visitors with unique experiences suited to the customer's needs and requirements. Personalization is different from customization. Personalization is achieved when a system creates an experience based on the consumer's previous behaviors whereas, customization is realized when the customer manually make changes so that they can achieve their preferred experience. Examples of offline personalization can be seen when waiters often greet their regular customers and also remember their usual order. Similarly, digital examples can be seen in top brands such as Amazon, Starbucks etc., where the companies use the purchase history and location data to get as many customer insights as possible. Netflix uses an algorithm that suggests what the customer might want to watch next based on their viewing history.

### Sentiment Analysis and Personalization

Sentiment analysis is the computerized procedure of understanding a supposition about a given subject from composed or spoken language. Opinion examination is one of the tools that help in comprehending the information that is created each day. Sentiment analysis can extract different attributes from a statement such as polarity – whether the speaker is expressing a positive or a negative view, subject – what is being talked about, opinion holder – The person or entity expressing the view. This kind of outcome is possible due to natural language processing (NLP). Sentiment analysis can be done at different levels – document, sentence and sub-sentence. Also, sentiment analysis can be used for emotion detection. Sentiment analysis is done by using techniques such as – Naïve Bays algorithm, linear regression, support vector machines and deep learning. Sentiment analysis is a useful application of personalization. One of the attractive points about sentiment analysis is that when the system is subjected to more data, it trains itself and the analysis becomes more and more accurate. Hence, when it comes to attaining accurate information about the customer's needs, sentiment analysis becomes a powerful tool. Sentiment analysis can be used from macro campaign level to micro wording of a landing page. Sentiment analysis allows you to fine tune your message. Facebook uses sentiment analysis to understand the intent of the users who are using the website. Sentiment

analysis also allows Facebook to understand what the people feel about the additions/removal of features that are done via regular updates.

### **Emotion detection and Personalization**

Emotion recognition is a procedure wherein a program is utilized to "read" the feelings on a human face utilizing advanced image processing. Organizations have been exploring different avenues regarding joining modern calculations with image processing techniques to see increasingly about how an individual is feeling. This when used in conjunction with sentiment analysis can help in providing useful insights for an organization. Emotion detection is used by many Fortune 500 companies such as Disney, Kellogg, and Unilever etc. Kellogg shows multiple versions of the same ad in order to test the audience.

Kellogg then uses the ad that had the most customer engagement or the ad with which the emotions of the customers lined up that the company was hoping to portray. Disney uses emotion AI for market research so that it can determine how audiences enjoy its movies. Disney used infrared cameras to capture audience reactions while they were watching „The Jungle Book“ and „Star Wars: The Force Awakens“. The emotion algorithm was powerful enough that after a few minutes of tracking the facial behavior, it was able to predict whether the viewer will smile or laugh in the coming scenes. This also creates a more accurate image of the audience response.

### **Artificial Intelligence leads to enhanced service quality**

Maintaining an old customer is much cheaper than acquiring a new customer. The old customers are valuable to any organization. According to a report acquiring a new customer costs the organization five times more amount than retaining their loyal customer and increasing customer retention by 5% can help the organization in improving their bottom-line by 25-95% as the case may be. The clients are expanding at an exponential rate hence keeping up legitimate service quality is particularly significant. This is the place artificial intelligence becomes an integral factor. Artificial Intelligence tools, for example, bots, inconsistency discovery and facial recognition help the association keep up a superior nature of service quality and thus improving the customer experience.

### **Employee Facing Bots and Enhanced service quality**

Virtual assistants or bots can be sent to help the employees, for example, by giving brisk answer formats, directing quicker ventures of the inner learning stage, or supporting another operational advance. The bots have a calculation that can break down the patterns and make snappy formats for answering the clients and in case the solution is not handy with the employee the bot can find the required knowledge article for the customer-facing employee.

Microsoft AI offers employee-facing bots as a piece of their Dynamics 365 solution. Inward offices at Microsoft, just as HP and Macy's are as of now utilizing this innovation to improve by and large consumer loyalty by taking care of more requests in a shorter amount of time. While these bots doesn't interact with the customer but can help in improving the customer experience by decreasing the average resolution time for the support time.

### **Customer Experience**

Customer Experience is what the customers of that brand perceives via all interaction across the lifecycle of the customer. Gartner defines "Customer experience is the perception of the customer and their feelings related to the employees, system, channel or product".

### **How personalization leads to Customer Experience**

Clients are totally responsible for the associations with the brands they partner. In this hypercompetitive market items and administrations are very little differentiable. The customized experience is the discussion of great importance. Certain organizations are conveying a custom-made encounter to their client and that is helping them drive higher incomes for their organization. As indicated by a study, 49% of the general population purchase an item that they mean to purchase however winds up purchasing due to personalization. Artificial Intelligence tools such as Emotional detection, Sentimental analysis provides a customized feel when they interact with the customer providing the customer with instant satisfaction. Personalization helps in providing a better association with the brand and it helps in improving the customer experience.

### **How enhanced service quality leads to Customer experience.**

In this hypercompetitive environment organization's need to find a perfect way to get associated with their existing customers and is very much evitable that customers while using the product needs some kind of assistance. Providing them with the required assistance and by reducing the turnaround time is very much required in today's business. Artificial Intelligence tools such as Chatbot's helps reduce the burden of the customer care executives by continuously learning from the conversation with the customers. Employee-facing bots help in reducing the turnaround time for the customer care executive by helping them find the appropriate resources from the knowledge base automatically. Customers are not willing to remain unattended by the organizations and their requirements are getting their problems solved immediately. Businesses need to provide top-notch service quality to their customer for retaining the customer and provide them with enhanced customer experience.

#### **1.1.1 How hassle-free service leads to Customer experience**

The business of every scale realized that delivering premium customer experience is the key to increase customer retentions and attracting new customers, ultimately boosting the bottom line for the organization. The differential factor for a better organization is providing extraordinary customer experience to its customer. Whenever a customer visits a supermarket or any retail store, they need to stand in a long queue at the checkout counters for checkout; this provides the customer with negative customer experience. The customers standing in the queue becomes restless and sometimes doesn't want to stand in that queue for checkouts. Artificial Intelligence tools such as facial detections detect the customer and self-checkouts can be done to provide the customers with superior customer experience. There are many AI tools such as automated content creation, bots etc. that helps in providing the customer with a hassle-free experience, that in return helps in creating a better customer experience.

## **2. RESEARCH IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS & RESULTS**

The proposed model shows that Artificial Intelligence tools such as sentiment analysis, emotion detection, virtual assistants, chatbots, and content curation lead to better personalization, quality of service and hassle-free service and in turn provides an enhanced customer experience. Positive experiences lead to feeling of satisfaction and better trust on the brand, depending on the degree of involvement of the customer and the perceived brand value. Customers who experienced personalization, smooth and superior quality of service would have a more loyalty towards the brand. These customers will be more inclined to refer the brand to other consumers, provide feedback on improvements etc. The study provides implications to practitioners for designing and developing AI tools such that they enhance customer experience, to managers for designing the information technology strategy of their companies, to academicians as it helps explore new technologies in the marketing domain and to the society as it will help improve customer experience thereby leading to customer satisfaction.

The conceptual model needs empirical verification. Hence an empirical study can be undertaken to test the propositions stated by this study. Further, there is a need for research in the cross disciplinary areas to identify the important features that will enhance the customer experience with the help of technology. As customer experience is one of the important perspective for any business these kind of research can help client facing manager making the customer experience more pleasant for consumers.

## **CONCLUSION**

When it comes to know that Artificial Intelligence has the potential to significantly improve customer experience and engagement in digital transformation. Artificial Intelligence with its ability to analyze large amounts of data and provide personalized recommendations, Artificial Intelligence can help businesses understand their customers' needs and preferences better. Artificial Intelligence driven chatbots can provide immediate assistance, while Artificial Intelligence enabled marketing campaigns can enhance engagement and conversions. Through offering personalized product recommendations, businesses can build customer loyalty and satisfaction, leading to an improved overall customer experience. Artificial Intelligence has the capability to revolutionize customer experience and engagement, providing businesses with the tools to deliver more personalized and relevant experiences.



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