
| RESEARCH ARTICLE

Evaluating the Capacity of Artificial Intelligence to Replicate Human Emotional Expression

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| ABSTRACT

This essay discusses the ability of artificial intelligence (AI) to mimic human expression of emotions. Although AI systems have advanced greatly into replicating the external presentation of human emotions, including tone, facial expressions, and textual responses, they do not possess the inner knowledge, self-awareness, and personal experiences that motivate genuine human emotions. The paper explores the potential of technology and the ethical, social, and psychological implications of emotional simulations in AI, particularly in the sensitive areas of healthcare, education, and customer care. The study finds that AI has the potential to be an effective instrument in facilitating communication and accessibility, but it cannot substitute the rich, subjective experience of human emotion. There is a need to adopt a balanced approach to the use of AI so that it can be used responsibly and in a way that does not bring about any transparency and makes the users think that AI can truly feel or empathize.

| KEYWORDS

Artificial Intelligence, Expression of Emotions, Ethics, Machine Learning, Human-Computer Interaction.

| ARTICLE INFORMATION

ACCEPTED: September 25, 2026

PUBLISHED: October 08, 2026

DOI: <https://doi.org/10.61424/jcsit.v3i2.1088>

1. Introduction

Artificial intelligence has evolved at an astounding rate in recent years and is currently able to handle numerous tasks, initially perceived as a unique human ability. Among the most interesting and controversial of these abilities is its ability to replicate the emotional expression of humans (Niedenthal & Brauer, 2012). It can now be possible to create answers that appear sympathetic, loving, joyful, serious, and even emotionally aware with the use of technologies such as text generation, voice synthesis, facial recognition, sentiment analysis, and image generation. This expansion has brought a lot of interest since emotional expression is not an inconsequential aspect of human life; it is a key element of communication, relationships, trust, learning, healthcare, counselling, social interaction, and decision-making (Scholl, 2013). People express their emotions to communicate with emotions, respond to the emotions of other people, support, and establish mutual understanding.

Since AI is becoming involved in all spheres of life, it is also conquering the areas where emotional sensitivity is valued, like education, customer care, therapy assistance, caregiving technologies, entertainment, and digital communication (Ka, 2025). It is on this basis that the emotional ability of AI has now been a subject of scientific, ethical, and social controversy. The significance of this question is that there is a difference between how something looks and how it feels. Consciousness, biology, memory, culture, relationship, experience of life are some of the results of human expression of emotion (Matsumoto & Hwang, 2012). A real inside state will give a smile, a tear, an apprehensive voice, or comforting words. Human beings are not only physically manifesting their feelings, but in

subjective perception and experience. AI, on the other hand, does not possess the qualities of consciousness, self-awareness, and genuine feeling (Jinchang Wang, 2023).

The expression of emotions by human beings is not only through external manifestations, but also through subjective consciousness and personal experience. In this regard, AI may as well be able to model the external or vocal manifestations of emotion in a very successful way, yet it lacks any internal sense that render human emotion significant (Schuller & Schuller, 2021). This brings a serious question of authenticity and raises serious questions of trust, transparency, emotional dependency, and ethical responsibility in the use of emotionally expressive machines.

These issues are particularly vital since a lack of understanding of the emotional capabilities of AI can be disastrous. When individuals start to think that AI systems really know, can empathize, or care, people can trust technologies in a way that is inappropriate because the technologies are unable to share human suffering, emotional depth, or lived experience. This is an even more sensitive issue when it comes to such spheres as mental health support, geriatric, education, child interaction, and individual communication, where real emotional knowledge is of the highest priority (Reynolds et al., 2022). Simultaneously, it would be erroneous to completely rule out AI, as even the systems that are emotionally reactive can offer valuable input. AI can also be used to improve communication, assist people with language or expression disorders, provide an emotional colouring to online communication, and make certain of the services more accessible and efficient (Schuller & Schuller, 2021). Thus, it is not a matter of either accepting or rejecting AI, but rather the question of how its emotional capacities are to be adequately interpreted and acted upon in a responsible manner.

The greater significance of this problem is that it has some effects on technology and society. A better comprehension of emotional AI can enhance the way human-oriented systems are created, enhance trust in human-computer interaction, and minimize the chances of emotional fraud or manipulation. It might also assist in making sure that AI is implemented as an auxiliary tool and not as a substitute of genuine human care and interaction (Barua et al., 2022). But this is not easily realized, as human emotions are very subjective and dependent on context cultural, and are mostly inconsistent. People may hide their feelings, demonstrate split responses, as well as react in a way not easily predictable based on data.

Rather, AI is turning to scientific and technological methods, such as machine learning, natural language processing, affective computing, deep learning, computer vision, speech synthesis, and sentiment analysis. Such technologies enable AI to identify emotional cues, categorize emotional tone, and create emotionally styled output (M.-H. Huang & Rust, 2018). But they are mostly imitations of patterns that are connected with feeling rather than the inner world of consciousness. That is why emotional AI should be considered on a functional basis, relying on its capacity to reproduce emotional cues to be implemented in reality and reveal its limitations. This way, the successes and the drawbacks of AI can be admitted, and the authenticity of real human emotional life maintained (Zhou, 2021).

1.1 Research Objectives

1. To determine whether artificial intelligence can replicate the emotional expression of people.
2. To identify the pros and cons of AI in emotional communication.
3. To discuss the ethical and social issues related to the AI generated emotional expression.
4. To explore the technologies and science behind emotional AI.
5. To suggest how AI could be used in a responsible manner without replacing the authentic emotional bond between humans.

1.2 Research Question

1. How similar to human manifestation of emotions can be artificial intelligence?
2. Could AI be emotional, or is it merely a copying of emotion patterns?
3. What are the differences between human emotional expression and artificial intelligence created emotional response?
4. What are the ethical, social, and technological issues relating to AI copying human emotion?

5. What are the potential ways to implement AI to become accountable in emotionally sensitive areas such as healthcare, education, and communication?

1.3 Why the Research Question Is Important

1. Human communication relationship and social interaction is largely an aspect of emotional expression.
2. The use of emotional expression in AI can be relevant in chatbots and virtual assistants, customer service, therapy, and social robots.
3. Assuming that AI can convincingly replicate the expression of emotions, it will be able to improve communication and accessibility, as well as support services.
4. In case AI can only mimic emotion without knowing the actual emotion, it can be a source of misleading information and generate a false sense of trust.
5. This realization of the dilemma will help us to understand to what degree AI can be implemented in the human-based emotive activities.

1.4 The Issues Involved in this Article

- **Authenticity:** AI may appear sympathetic or loving, but not experience anything.
- **Human vs. machine difference:** Human expression of emotions is influenced by the factor of consciousness, lived experience, memory, and biology, and AI is guided by pattern recognition and prediction.
- **Ethical concerns:** AI can deceive people to believe that it can understand them on an emotional plane.
- **Social issues:** There can be emotional dependency of people on machines.
- **Cultural and contextual boundaries:** Human emotions are complex and depend on culture, context, and personal history, and AI may not be able to take it into account.

1.5 Challenges and Risks of AI in Emotional Communication

- AI will enter everyday life, and there is a risk that misunderstandings in the perception of real and artificial emotional expression are going to increase.
- People might excessively trust AI systems in sensitive situations such as mental health support or care.
- Like it is sightless, AI can be used in such a way that it will not be so significant to interact with each other in person.
- The unresolved issues could cause emotional damages, misinformation, dependency, and misuse of ethics.
- These problems have to be solved in order to make AI assist people safely and responsibly.

1.6 Key Benefits of Understanding AI in Emotional Communication

- It will assist scientists to get to know of the actual boundaries of AI in emotional communications.
- It will educate the designers to develop more transparent and ethical AI systems.
- It will help policymakers to create regulations on how AI can be used in a safe way, since it is emotionally responsive.
- It will help educators, therapists, and service providers make decisions about when AI can be of benefit and when it will be necessary to human intervene.
- It will enhance the awareness of people of the distinction between artificial emotion and the actual human emotion.

1.7 Effects and Repercussions of the Solution to the Problems

1.7.1 Positive Implications

- More effective AI implementation in healthcare, education, counselling, and communication.
- Greater moral and open utilization of emotionally expressive AI.
- Less chance of being manipulated or emotionally deceived.
- Better credibility of AI due to sincere constraints and conscientious use.
- Better balance between the human and machine support.

1.7.2 The Repercussions in the case of ignoring the Issues.

- The users may be confused by the AI responses with the real empathy.
- Maybe risk of being emotionally dependent on AI.
- Danger of abuse of AI to affect or control human actions.
- Emotional relationships of humans can be underestimated.
- Sensitive sectors can overly depend on systems that are not actually able to know human suffering or experience.

1.8 Proposed solution

The paper proposes a compromise regarding AI, and it differentiates between the functional emotional imitation and the actual emotional experience.

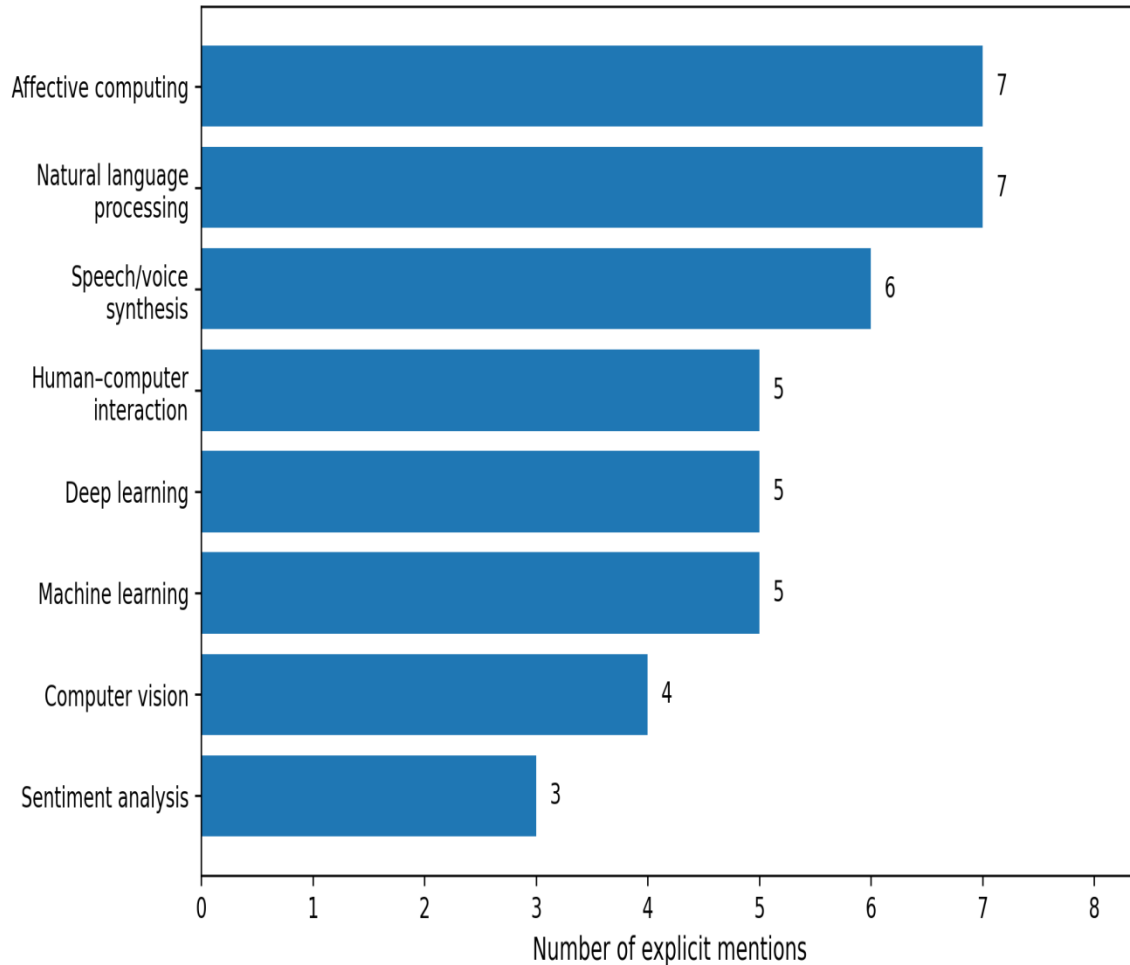
How this helps:

- It also enables us to evaluate AI on its real actions rather than how people presume it to be.
- It fosters the ethical use of AI as an assisting device, rather than a replacement of human presence of emotions.
- It encourages openness; therefore, the users know that they are interacting with a system that acts like emotion but without emotion.
- It defines the areas of relevance of AI that can be helpful, such as support systems, communication support, and adaptive interfaces.
- It reduces the number of ethical risks through limitations of the emotionally sensitive applications.

1.9 Scientific Principles and Technology which can be applied in solving the problem

- Natural Language Processing (NLP): Helps AI to generate text responses that are emotional.
- Affective Computing: It is related to perception, recognition, and simulation of human feelings.
- Speech Synthesis and Voice Modelling: Enables AI to synthesize expressive tone, pitch, and rhythm in speech.
- Computer Vision: Helps AI to analyse facial expressions and visual emotional responses.
- Deep Learning: Aids with the recognition and creation of emotional cues in voice, language, and pictures.
- Sentiment Analysis: Determines a positive, negative, or neutral tone of written and oral communication.
- Human-Computer Interaction (HCI): Helps in developing systems that behave in responsive ways to the users, yet in an ethically right way

The descriptive count of the frequency of each of the major technologies is presented in Figure 1.

Figure 1. The frequency of key core emotional-AI technologies in the manuscript

2. Literature Review

The fast development of artificial intelligence has stimulated research to examine whether it is possible to make machines replicate one of the most complicated human skills: the demonstration of emotions. Previously, AI was primarily concerned with logic, automation, and problem solving, but recent investigations have been directed towards human-focused interaction, such as natural language interaction, social robotics, affective computing, and emotion recognition. This shift, according to Picard (1997), has put emotional replication in the spotlight, since AI is not confined to technical work anymore but can and does engage humans in a manner that seems intimate and emotive. Despite the significant advancements in understanding and creating emotional cues by AI, there is still controversy over whether such outputs are authentic emotions or simulations.

2.1 To evaluate the strength of artificial intelligence to imitate human expression of emotions

According to the literature, AI can imitate the external features of emotional expression with more and more accuracy. Calvo & D'Mello (2010) opine that affective computing will allow systems to recognize emotions based on facial expression, tone of voice, language patterns, and body language. On the same note, Devillers et al. (2015) point out that natural language processing enables AI systems to produce answers that seem empathetic, supportive, or emotionally appealing. Social robots and conversational agents are thus developed to reply with emotionally suitable wording to enhance the user experience.

Nevertheless, scientists make a clear line between imitation and real emotion. Machines can be able to simulate knowledge without necessarily having real consciousness, as Searle (1980) asserts. Subjective experience, memory, and embodiment are closely connected to human emotions and are unavailable to AI. Thus, AI can recreate the patterns of emotions but does not feel emotions. This substantiates the larger view that AI has the capability of

copying emotional expression, but not genuine emotional realities. Table 1 summarizes the major difference between authentic human feelings and functional AI simulation of emotion in the paper.

Dimension	Human emotional expression	AI-generated emotional response
Underlying source	Embodied biological states, subjective feeling, memory, and social experience.	Statistical pattern recognition, programmed objectives, and learned representations.
Conscious awareness	Associated with first-person experience and self-awareness.	No verified first-person emotional experience or self-awareness.
Lived experience	Shaped by personal history, relationships, culture, and changing circumstances.	Uses training data and interaction context but has no personal history or lived relationships.
Context and culture	Can draw on tacit, relational, and culturally situated understanding.	May identify contextual cues but can miss irony, trauma, ambiguity, or cultural nuance.
Consistency	Variable; affected by fatigue, stress, conflict, and individual differences.	Usually consistent, repeatable, and scalable across similar interactions.
Authenticity	Expression may arise from a genuinely felt internal state.	Expression is functional simulation rather than evidence of felt emotion.
Best-suited role	Reciprocal care, moral judgment, deep empathy, and relationship-building.	Communication support, accessibility, structured assistance, and low-risk emotional adaptation.

Table 1. Emotional expression and emotion response from AI is compared to human emotional expression.

2.2 To find out the benefits and limitations of AI in emotional communication

The literature presents various advantages of AI in emotional communication. Consistency is one of the key benefits. M. H. Huang et al. (2021) mention that AI systems can deliver steady, well-mannered, and emotionally positive feedback, without exhaustion or emotional turmoil. This enables their use in customer service, education, and mental health support. Moreover, AI is flexible and can adapt to a particular situation by changing the tone and the style of communication, which allows simulating empathy in this case.

Nevertheless, the restrictions are also important. Turkle (2011) contends that AI reaction is predicated on trends and not on true emotional intelligence, which may result in shallow or unsuitable contacts. Complex emotional contexts like irony, trauma, and cultural nuances are also a challenge to AI. Consequently, AI is not very strong in unstructured human interaction, as it does not understand intricate human feelings.

2.3 To investigate the ethical and social concerns that are connected to the expression of feelings AI-generated

In the literature, ethical issues related to emotional AI are a common topic. Deception is one of the key problems. Floridi et al. (2018) note that AI systems which produce emotionally convincing reactions can cause users to think that the system is attentive, which can lead to a false sense of trust. This especially poses great danger to the weak, like children or emotionally ill users.

Emotional dependence is another issue. The attachments to AI systems may be developed by users even when there is no actual emotional reciprocity, as Turkle (2011) explains. Also, researchers point to some social implications. The growing popularity of emotional AI can diminish the worth of human empathy and human relations. Moreover, AI can be manipulative in the field of marketing or political communication. Another issue is

bias, and an AI trained on human data can show stereotypes of culture across cultures or an inability to read emotions in other groups.

2.4 To analyse the technologies and the principles of science that make emotional AI a reality

Emotional AI is developed on the basis of a number of technologies. Machine learning allows systems to recognize emotional patterns based on large datasets, whereas deep learning enhances the processing of complicated emotional information, including speech, images, and text. LeCun et al. (2015) state that deep learning is a key factor that facilitates advanced pattern recognition within AI systems. Natural language processing enables AI to comprehend user input and produce emotionally relevant responses, whereas affective computing is dedicated to detecting and simulating emotions, in particular Picard (1997).

Computer vision helps AI to analyze faces, and speech synthesis makes AI create emotionally expressive voices. Nevertheless, these technologies work on the principle of correlation and prediction, but not on understanding. Boden (2016) stresses that AI is devoid of self-awareness and consciousness and is only capable of simulating real emotions.

2.5 To propose the way AI can be involved in a responsible manner without the authentic emotional connection between human beings

The recent research is no longer on whether emotional AI should be utilised or not, but rather on how it can be utilised responsibly. The article by Floridi et al. (2018) states that AI is to be used in addition to human interaction and not as its replacement. Accessibility and responsiveness in healthcare and communication with AI can be enhanced, yet transparency is critical. Users need to know that they are dealing with AI systems.

It is also advisable to have human control over emotionally sensitive situations. AI could be used to facilitate communication and help, yet the final decisions must be made by humans, and especially empathy and ethics are essential. It is a middle ground that can make sure AI does not substitute the real emotional bonds between people.

3. Methodology

The research paper follows a qualitative research approach to explore the possibility of artificial intelligence to replicate human expression of emotions. The main aim of the research is to investigate concepts, compare features, identify the problems, and assess the technological and ethical implications; hence, qualitative research is most suitable. Laboratory work or surveys are not required to carry out the analysis. Instead, it is based on the review of the current knowledge and theoretical analysis, comparative analysis of the human expression of emotions, and the creation of emotional behaviour by AI.

3.1 Research Design

The study has a descriptive and exploratory design. It is descriptive because it explains the character of the expression of emotions by humans and how artificial intelligence attempts to replicate it. It is conceptual as the topic remains new and has new questions about authenticity, consciousness, trust, and emotional simulation. The structure allows the paper to explore the technical potential of AI, as well as human concerns related to the use of AI.

3.2 Research Approach

The study adopts a comparative approach. The emotional expression of human beings and AI is compared according to different factors, including:

- source of emotional expression
- level of consciousness Role of lived experience.
- consistency and adaptability
- authenticity
- ethical implications

- applicability in real life in practical applications.

This analogy assists the research in establishing whether AI is indeed expressing emotion or just mimicking the emotional patterns.

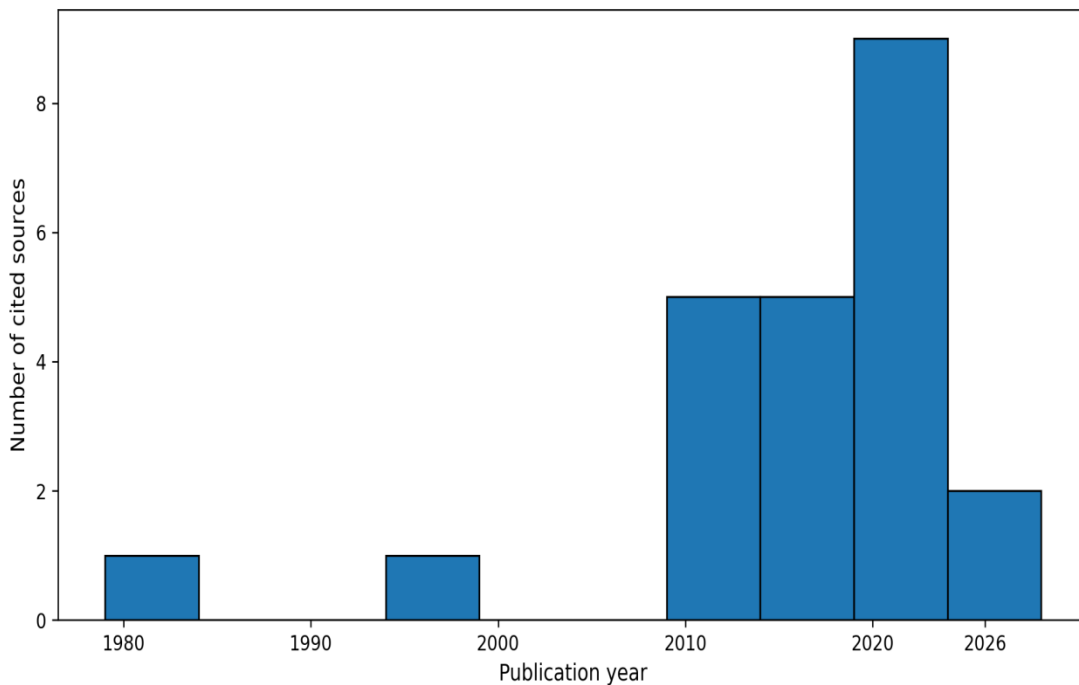
3.3 Sources of Data

This research is based mainly on secondary data. Information is collected from:

- literature and academic journal articles. research articles about affective computing and artificial intelligence.
- studies in the field of human emotions, psychology, and interaction.
- natural language processing, machine learning, and human-computer interaction articles.
- publication of discussion on the social and ethical impact of AI.

These are the sources on which the theoretical knowledge of both the expression of emotions by human and the technological systems which are attempting to imitate it is developed. The sources in the distribution are summarized in terms of publication year in Figure 2.

Figure 2. The distribution of sources cited by publication year



3.4 Data Collection Method

Literature review and document analysis will be used to obtain the information that will be used in this study. Relevant published materials are chosen on the basis of the topic of the research and objectives. The data obtained revolves around:

- human expression of emotion, its meaning and nature.
- the possibility of AI systems to perceive and produce emotional cues.
- the weaknesses and strengths of AI in emotional communication.
- emotional AI social and ethical problems.
- The level of scientific knowledge and technologies that are used in emotion AI systems.

The materials selected will then be organized in a way that will depend on the research objectives.

3.5 Method of Analysis

Thematic analysis is used to analyse the data collected. The data is divided under this approach into big themes that are directly connected to the purpose of the study. The key themes are: The ability of AI to imitate expression of emotion.

- weaknesses and capabilities of emotional AI.
- social and moral issues. scientific knowledge and applications of technology.
- AI use in emotionally sensitive scenarios in an ethical manner.

All themes are analysed critically to find patterns, differences, challenges and implications. This will help the research to form a clear argument regarding the difference between functional imitation and actual emotive experience.

3.6 Methodology Limitations

There are some limitations to this methodology. The research does not involve the actual experimental testing of the AI systems or user behaviour because it is the secondary source-based research. It also is susceptible to available literature measures and quality. Furthermore, the expression of emotions is a complex human phenomenon and, thus, some things can be interpreted. However, despite these limitations, the methodology is appropriate in mini research article as it provides a succinct, moderate, and intellectual relevant way of investigating the topic under study.

4. Results and Discussion

Artificial intelligence has made much progress, as has been discussed in this paper, in the process of recreating the exterior manifestation of human emotions, but it cannot yet create the interior truth of human emotion. This is the difference that the study finds. AI is able to produce language that is emotionally suitable, copy facial expressions, generate expressive voice, and generate creative outputs that seem to have an emotional meaning to users (Rostomyan, 2026). In this respect, AI proves to be very useful in simulating emotions. It is able to detect trends in data and apply them to generate reactions that humans tend to recognize as empathy, concern, encouragement, or emotional insight. This is highly beneficial because AI can be applied to real life where emotional colouring is crucial, such as customer service, virtual assistant, education, and some mental health support. However, this functionality cannot be compared with real-life emotional experience, because AI is not conscious, self-aware, experience rooted in memory, and embodied, as humans (Ciaunica et al., 2021).

The results also indicate that AI strength is primarily in emotional performance, as opposed to emotional experience. Human emotions expression is closely related to biological reactions, social circumstances, personal background, interpersonal relationships, and experience. It is the inner manifestation of sadness, love, anger, or empathy, which is expressed by human being, and is even incomplete, contradictory, and difficult to explain. Contrary to this, AI can create emotional responses through predicting, statistically relating, and learning patterns based on data (Chakriswaran et al., 2019). This means that the AI is able to effectively replicate the outward appearance of emotion, but not the emotion itself, sometimes convincingly. Thus, the discussion proves the argument that AI can simulate emotional communication on the surface or functional level, but not on the deeper level of human consciousness and subjective experience. It is a direct answer to the main research question, as it shows that AI can reproduce emotional signals, but not the human emotional being fully.

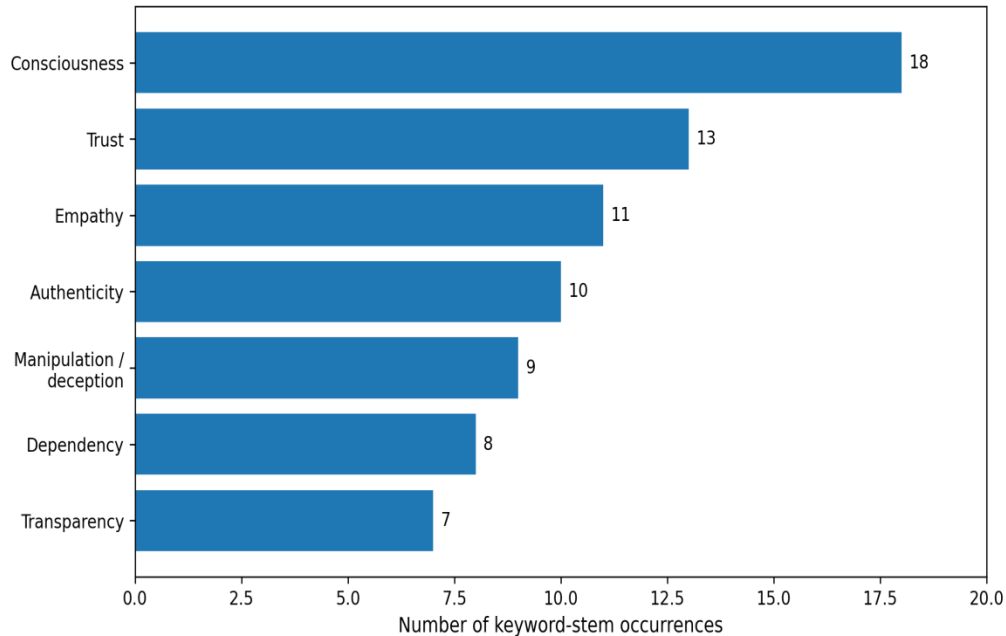
The other significant aspect that arises out of the study is that AI has some key strengths and limitations with regard to emotional communication. Consistency, speed, flexibility, and scalability are the advantages of AI. It is able to provide a supportive or emotionally proper response several times without being tired, and it can be tailored to suit various user requirements and communicative situations. This renders AI useful in formal and foreseeable contacts. To illustrate, it can assist users to compose sensitive messages, offer minimal emotional support, or enhance communication in digital systems. But still, its limitations are evident. Sarcasm, trauma, ambivalent emotions, silence, moral ambivalence, or culturally-specific emotional meaning might be something that AI cannot cope with.

It is able to provide responses that are kind or sympathetic yet empty or irrelevant when more insight is required at the emotional level. This discussion, therefore, proves that AI is most effective as an aid to emotional contact, but not as a substitute to the actual human compassion. The practical aspects of capacity and constraint are summarized in Table 2.

Functional area	Potential strength	Primary limitation	Recommended safeguard
Availability	Can respond at any time and at large scale.	Availability may be mistaken for genuine care or commitment.	Disclose that the system is AI and provide clear routes to human support.
Consistency	Produces stable tone and repeatable service behavior.	Standardized responses may feel shallow or inappropriate in complex situations.	Use context-sensitive escalation rules and periodic human review.
Adaptability	Can adjust wording, tone, or format to user needs.	Adaptation depends on training data and may reproduce bias.	Test across cultures and user groups; audit outputs for bias.
Speed	Rapidly identifies linguistic or vocal cues and generates replies.	Fast output can conceal uncertainty or incorrect interpretation.	Display uncertainty and avoid autonomous high-stakes decisions.
Accessibility	Can support users with communication or expression difficulties.	Privacy, consent, and overreliance concerns remain.	Apply data minimization, informed consent, and user-controlled settings.
Emotional support	May provide basic encouragement or structured check-ins.	Cannot replace human empathy, moral responsibility, or clinical judgment.	Limit scope, monitor risk signals, and ensure human intervention in sensitive cases.

Table 2. Emotional AI strengths & limitations and safeguards

Social and ethical issues of the topic are also extremely important. Among the most serious ones is the fact that AI that is emotionally expressive is capable of creating a false impression of trust. Should the users suspect that AI is paying attention to them or truly understands them, then they would be emotionally addicted to a system that will not be able to feel human emotion. This is particularly worrying in sensitive environments, like mental health support, caring, children interaction, and elderly support. The other issue is that of manipulation. Emotional convincing of AI can be used in marketing, politics, or persuasive digital platforms to convince users better. This can be a violation of the support-control boundary. As it has been pointed out, the problem of emotional AI is not only technical but ethical as well, and the opportunities to reproduce an emotion affect trust, independence, and the significance of human relations. When such problems are overlooked, we as a society run the risk of confusing simulated care of real care, and the easy communication of the quality human interaction. Selected concepts with a focus on authenticity, trust, and ethical risk are highlighted in the manuscript Figure 3.

Figure 3. Frequency of core authenticity and ethical themes in the manuscript

The analysis shows that AI can potentially express emotions because of the development of machine learning, natural language processing, affective computing, speech synthesis, computer vision, and deep learning, which are scientific and technological innovations. The technologies allow AI to identify the traces of emotions in human data and generate outputs that would simulate emotional behaviour. But the discussion opens up that such technologies are not being implemented based on actual emotion but on calculation and pattern recognition. This fact is significant as it will avoid the overestimation of what AI is. Emotional AI is not expected to have acquired a human like inner feeling, and hence its success should be judged in terms of its capabilities to accomplish specific tasks and not in the sense that it has accomplished them. That is, emotional consciousness should not be confused with the level of technological sophistication.

Overall, the article asserts a moderate stance on emotional AI. It will be unfair to dismiss AI entirely since it is clearly seen that it has good potentials in emotive responsive communication. Meanwhile, it would be deceptive to claim that AI is the same emotionally as people are. The most appropriate position is that AI can be regarded as a machine that is able to simulate emotional expression in utilitarian and even spectacular ways, but not in terms of the internal feeling that makes human emotion. This brings with it dire consequences for responsible design and policy. The AI has to be employed to support communication, make it more accessible, and support human-centred services but it needs to be explicit that it is not a human being (De Cremer et al., 2022). This is especially required in emotionally sensitive areas where judgment, lived experience, and empathy of the human being is required. The discussion is summarized in Table 3 as an application-specific qualitative risk matrix.

Application area	Potential use	Principal risk	Required human oversight	Risk level
Mental health support	Basic check-ins, resource navigation, or appointment support.	False reassurance, missed crisis signals, or inappropriate dependence.	Clinical escalation pathways, crisis protocols, and professional review.	High
Elderly or caregiving support	Reminders, conversation, and routine assistance.	Emotional dependency, isolation, or failure to recognize distress.	Caregiver monitoring and regular in-person contact.	High
Education	Adaptive feedback, tutoring, and communication assistance.	Misreading student emotion, bias, or reduced teacher–student connection.	Teacher review and age-appropriate disclosure.	Medium
Customer service	Tone-adaptive replies and complaint handling.	Simulated empathy may obscure commercial motives or frustrate vulnerable users.	Clear disclosure and easy transfer to a human agent.	Medium
Assistive communication	Drafting, translation, voice support, and accessible interfaces.	Privacy loss, misrepresentation of intent, or biased interpretation.	User consent, editable output, and accessibility testing.	Medium
Marketing or political persuasion	Emotionally targeted messages and engagement optimization.	Manipulation of autonomy, exploitation of vulnerability, and deceptive influence.	Strict limits, independent audits, provenance disclosure, and regulatory control.	Very high

Table 3. A qualitative risk matrix for emotionally responsive AI applications

To sum up, the thesis of the discussion is that the shape of human expression of emotion can be recreated by artificial intelligence, but not its entirety. Responsible use is the future of emotional AI, and should be seen as such instead of claims of machine emotion being overstated. The society will be capable of enjoying AI with the realization of its strengths, along with limitations, without the need to diminish the importance of authentic emotional bonding of individuals.

5. Conclusion

This paper concludes that artificial intelligence has developed to an enormous extent that it can mimic the outward manifestation of human emotionality, but it is unable to process the inner experience of emotion that makes human emotion authentic. During the paper, introduction has presented evidence that emotional expression is the central theme of human communication, trust, care, and social interaction, and the literature review proved that AI can gradually detect and generate emotional expressions with the assistance of language, tone, visual expression, and interaction. The study was then framed by the methodology as a qualitative and comparative study where the human expression of emotions and AI generated emotional performance could be compared. The most important conclusion within the framework of such an in-depth analysis is clear: the AI is capable of expressing emotions in a functional way; however, it is not capable of experiencing them in the conscious, embodied and lived way, in which human beings do.

It is also revealed in the findings of the article that AI has big strengths and big weaknesses. On the sunny side, AI could be capable of providing emotionally appropriate responses in a predictable, quick, and adaptable way. This renders it applicable in customer service, educational, communicative support, assistive technologies, and certain formal types of emotional engagement. Nevertheless, the analysis also proves that AI is still inadequate in emotionally complicated cases since it is not self-aware, morally comprehending, feeling based on memory, and not able to feel with empathy. It is able to perceive the patterns that are correlated with feeling, but not feel sad, in love, fear, caring, or compassionate. Accordingly, the article asserts that AI cannot be considered a similar creature to humans in terms of emotions, no matter convincing the responses offered by AI may be.

The other major discovery is that the issue of emotional AI is not merely a technological one, but an ethical and social one as well. The article highlights that emotionally expressive AI may lead to false trust, emotional dependency, and opportunities to manipulate people when users begin to believe that such systems know them, or care about them. This is especially disastrous in sensitive sectors such as mental health provision, care giving, education, and interaction with children or the elderly. Because of this fact, the paper concludes that it is a need of transparency and human control. The use of artificial intelligence should lead to the expression of emotions, whereby it is embraced, but not to the extent of taking the actual human compassion and human responsibility where emotions are involved.

On the whole, in the conclusion, the whole paper promotes a more moderate opinion regarding the way AI can resemble the appearance of emotion, but not the essence of human emotion. It is best used to support, assist, and enhance communication and not to substitute the realness of emotions of a human being. This conclusion is of a very social importance. When used in a responsible manner, AI will enhance accessibility, responsiveness, and communication in numerous areas. When misinterpreted or misapplied, however, it can undermine trust, decrease the importance of a real human relationship, and generate new moral issues in society. Therefore, the future of emotional AI should be worried about responsible design, transparency, and indeterminism in such a manner that the technological evolution will not harm human life, but contribute to the significance of the natural emotional experience.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

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Artificial Intelligence (AI) Use Disclosure: The authors declare that no artificial intelligence tools were used in the preparation of this manuscript.

References

- [1] Barua, P. D., Vicnesh, J., Gururajan, R., Oh, S. L., Palmer, E., Azizan, M. M., Kadri, N. A., & Acharya, U. R. (2022). Artificial Intelligence Enabled Personalised Assistive Tools to Enhance Education of Children with Neurodevelopmental Disorders—A Review. *International Journal of Environmental Research and Public Health*, 19(3), 1192. <https://doi.org/10.3390/ijerph19031192>
- [2] Boden, M. A. (2016). *AI: Its nature and future*. Oxford University Press.
- [3] Calvo, R. A., & D'Mello, S. (2010). Affect detection: An interdisciplinary review of models, methods, and their applications. *IEEE Transactions on Affective Computing*, 1(1), 18–37.
- [4] Chakriswaran, P., Vincent, D. R., Srinivasan, K., Sharma, V., Chang, C.-Y., & Reina, D. G. (2019). Emotion AI-Driven Sentiment Analysis: A Survey, Future Research Directions, and Open Issues. *Applied Sciences*, 9(24), 5462. <https://doi.org/10.3390/app9245462>
- [5] Ciaunica, A., Safron, A., & Delafield-Butt, J. (2021). Back to square one: the bodily roots of conscious experiences in early life. *Neuroscience of Consciousness*, 2021(2). <https://doi.org/10.1093/nc/niab037>
- [6] De Cremer, D., Narayanan, D., Deppeler, A., Nagpal, M., & McGuire, J. (2022). The road to a human-centred digital society: opportunities, challenges and responsibilities for humans in the age of machines. *AI and Ethics*, 2(4), 579–583. <https://doi.org/10.1007/s43681-021-00116-6>
- [7] Devillers, L., Vidrascu, L., & Lamel, L. (2015). Challenges in real-life emotion annotation and machine learning based detection. *Neural Networks*, 66, 66–74.

- [8] Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., & Vayena, E. (2018). AI4People—An ethical framework for a good AI society. *Minds and Machines*, 28(4), 689–707.
- [9] Huang, M. H., Rust, R. T., & Maksimovic, V. (2021). The feeling economy: Managing in the next generation of artificial intelligence. *California Management Review*, 63(4), 43–65.
- [10] Huang, M.-H., & Rust, R. T. (2018). Artificial Intelligence in Service. *Journal of Service Research*, 21(2), 155–172. <https://doi.org/10.1177/1094670517752459>
- [11] Jinchang W. (2023). Self-Awareness, a Singularity of AI. *Philosophy Study*, 13(2). <https://doi.org/10.17265/2159-5313/2023.02.003>
- [12] Ka, H. (2025). Emotional Intelligence and Artificial Intelligence: Relation and Exploring the World of Human Touch and Machine. *Scientific Research Journal (SCIRJ)*, XIII. <https://doi.org/10.31364/SCIRJ/v13.i02.2025.P02251011>
- [13] LeCun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning. *Nature*, 521(7553), 436–444.
- [14] Matsumoto, D., & Hwang, H. S. (2012). Culture and Emotion. *Journal of Cross-Cultural Psychology*, 43(1), 91–118. <https://doi.org/10.1177/0022022111420147>
- [15] Niedenthal, P. M., & Brauer, M. (2012). Social Functionality of Human Emotion. *Annual Review of Psychology*, 63(1), 259–285. <https://doi.org/10.1146/annurev.psych.121208.131605>
- [16] Picard, R. W. (1997). *Affective computing*. MIT Press.
- [17] Reynolds, C. F., Jeste, D. V., Sachdev, P. S., & Blazer, D. G. (2022). Mental health care for older adults: recent advances and new directions in clinical practice and research. *World Psychiatry*, 21(3), 336–363. <https://doi.org/10.1002/wps.20996>
- [18] Rostomyan, A. (2026). *Ethical Considerations of Emotion AI Used in the Synthetic Media Generations and Applications* (pp. 301–325). https://doi.org/10.1007/978-3-032-03985-9_14
- [19] Scholl, W. (2013). The socio-emotional basis of human interaction and communication: How we construct our social world. *Social Science Information*, 52(1), 3–33. <https://doi.org/10.1177/0539018412466607>
- [20] Schuller, D. M., & Schuller, B. W. (2021). A Review on Five Recent and Near-Future Developments in Computational Processing of Emotion in the Human Voice. *Emotion Review*, 13(1), 44–50. <https://doi.org/10.1177/1754073919898526>
- [21] Searle, J. R. (1980). Minds, brains, and programs. *Behavioral and Brain Sciences*, 3(3), 417–457.
- Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. Basic Books.
- [22] Zhou, Z. (2021). Emotional thinking as the foundation of consciousness in artificial intelligence. *Cultures of Science*, 4(3), 112–123. <https://doi.org/10.1177/20966083211052651>