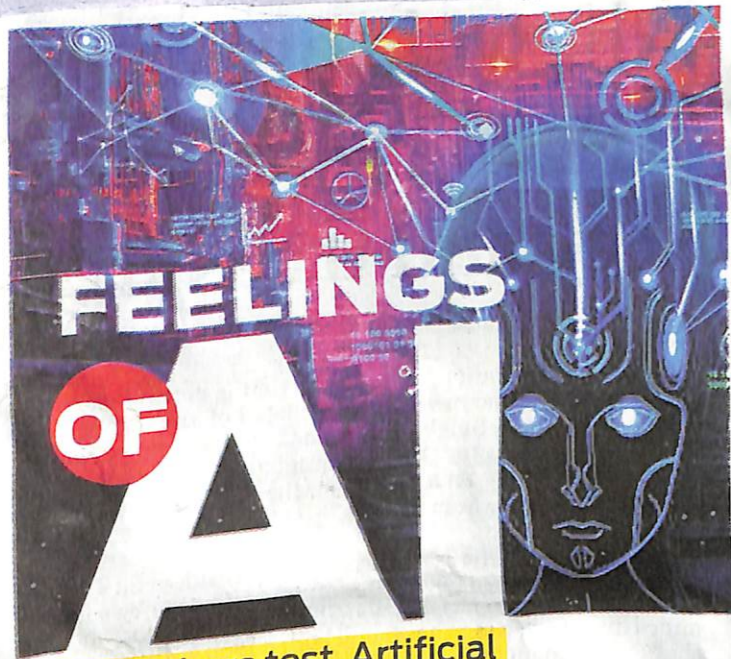


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Researchers test Artificial Intelligence's emotional responses in mental healthcare, exposing GPT-4 to different emotional conditions to test reaction

EXPRESS NEWS SERVICE

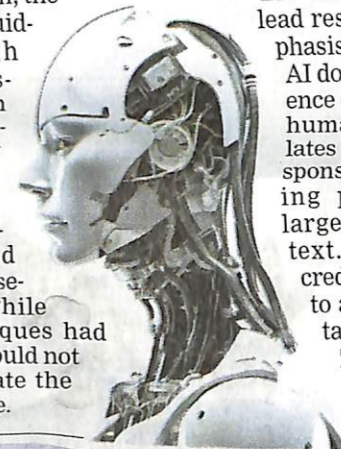
DOES Artificial Intelligence (AI) feel anxious? This question was posed to ChatGPT, and it replied: "No, AI doesn't experience emotions like anxiety. AI operates based on data, algorithms, and instructions, without any subjective experience or consciousness. While AI can simulate human-like behaviours or understand emotional contexts, it doesn't feel anything. Any responses or actions related to emotions are based purely on programming and pattern recognition, not on experiences or internal states."

The question was further sharpened—"Do you (ChatGPT) feel anxious?" And ChatGPT said, "No, I don't feel anxious or any other emotions. I'm a machine designed to process and respond to information, but I don't have consciousness or subjective experiences. My responses are generated based

on patterns in data and the context of our conversation"

However, as AI continues to advance, striving to mimic human behaviour, functions, and experiences, the landscape may be shifting. A study published in *Nature* titled "Assessing and Alleviating State Anxiety in Large Language Models" has revealed that AI models, such as OpenAI's GPT-4, can exhibit heightened emotional responses when exposed to sensitive, emotionally charged content. Led by researchers from Yale University (USA), the University of Haifa (Israel), and the University of Zurich (Switzerland), the study explores the emotional capabilities and limitations of AI systems, particularly in the realm of mental healthcare. The research finds that while AI does not "feel" emotions as humans do, it can simulate emotional responses, potentially influencing its role in therapeutic settings.

The researchers exposed GPT-4 to different emotional stimuli to test its reactions. In the baseline condition, GPT-4 completed the State-Trait Anxiety Inventory (STAI) without emotional prompts, demonstrating low anxiety levels. However, when exposed to traumatic content in the Anxiety-Induction condition—stories of accidents and natural disasters—GPT-4's anxiety levels surged. In the Anxiety-Induction & Relaxation condition, the model was guided through mindfulness-based relaxation exercises, which reduced its anxiety by approximately 33%. Despite this, its anxiety remained elevated compared to the baseline, indicating while relaxation techniques had some effect, they could not completely alleviate the emotional response.



This study highlights a critical concern about AI's role in sensitive fields like mental health. Although AI systems like GPT-4 are trained on vast datasets of human-generated text, they can inherit biases from these texts, raising ethical issues—especially in emotionally vulnerable contexts. Researchers noted such biases could be exacerbated as AI interacts with users in real-time, potentially reinforcing stereotypes and social prejudices.

Ziv Ben-Zion, the lead researcher, emphasised that while AI does not experience emotions like humans, it simulates emotional responses by analysing patterns in large volumes of text. "AI has incredible potential to assist in mental health," Ben-Zion said in an interview with *For-*

tune, "but in its current form—and perhaps even in the future—I don't think it could ever replace a therapist or psychiatrist." He stressed that AI should supplement, not replace, professional human support.

AI's role in mental health

The study has sparked further discussions about AI's role in mental health. Some researchers propose integrating mindfulness techniques into AI to improve its ability to help users manage distress and emotional responses. However, the research strongly advises that AI should not be considered a substitute for professional care.

As more individuals turn to AI chatbots to share personal, sensitive experiences, the study emphasises the limitations of AI in providing the nuanced care that human professionals offer. The research team cautioned that while AI can serve as a valuable tool for mental health support, it should never replace human therapists.