

PRESS RELEASE

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Could Al understand emotions better than we do?

A UNIGE and UniBE team shows that generative Al can outperform humans in emotional intelligence tests. Is artificial intelligence (AI) capable of suggesting appropriate behaviour in emotionally charged situations? A team from the University of Geneva (UNIGE) and the University of Bern (UniBE) put six generative AIs — including ChatGPT — to the test using emotional intelligence assessments typically designed for humans. The outcome: these AIs outperformed average human performance and were even able to generate new tests in record time. These findings open up new possibilities for AI in education, coaching, and conflict management. The study is published in Communications Psychology.

Large Language Models (LLMs) are artificial intelligence (AI) systems capable of processing, interpreting and generating human language. The ChatGPT generative AI, for example, is based on this type of model. LLMs can answer questions and solve complex problems. But can they also suggest emotionally intelligent behaviour?

Emotionally charged scenarios

To find out, a team from UniBE, Institute of Psychology, and UNIGE's Swiss Center for Affective Sciences (CISA) subjected six LLMs (ChatGPT-4, ChatGPT-01, Gemini 1.5 Flash, Copilot 365, Claude 3.5 Haiku and DeepSeek V3) to emotional intelligence tests. "We chose five tests commonly used in both research and corporate settings. They involved emotionally charged scenarios designed to assess the ability to understand, regulate, and manage emotions," says Katja Schlegel, lecturer and principal investigator at the Division of Personality Psychology, Differential Psychology, and Assessment at the Institute of Psychology at UniBE, and lead author of the study.

High resolution pictures

For example: One of Michael's colleagues has stolen his idea and is being unfairly congratulated. What would be Michael's most effective reaction?

- a) Argue with the colleague involved
- b) Talk to his superior about the situation
- c) Silently resent his colleague
- d) Steal an idea back

Here, option b) was considered the most appropriate.

In parallel, the same five tests were administered to human participants. "In the end, the LLMs achieved significantly higher scores — 82% correct answers versus 56% for humans. This suggests that these Als not only understand emotions, but also grasp what it means to behave with emotional intelligence," explains Marcello Mortillaro, senior scientist and head of applied research at the UNIGE's Swiss Center for Affective Sciences (CISA), who co-authored the research.

New tests in record time

In a second stage, the scientists asked ChatGPT-4 to create new emotional intelligence tests, with new scenarios. These automatically generated tests were then taken by over 400 participants. "They proved to be as reliable, clear and realistic as the original tests, which had taken years to develop," explains Katja Schlegel. "LLMs are therefore not only capable of finding the best answer among the various available options, but also of generating new scenarios adapted to a desired context. This reinforces the idea that LLMs, such as ChatGPT, have emotional knowledge and can reason about emotions," adds Marcello Mortillaro.

These results pave the way for AI to be used in contexts thought to be reserved for humans, such as education, coaching or conflict management, provided it is used and supervised by experts.

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