

# New AI can 'read human behavior' with unprecedented accuracy

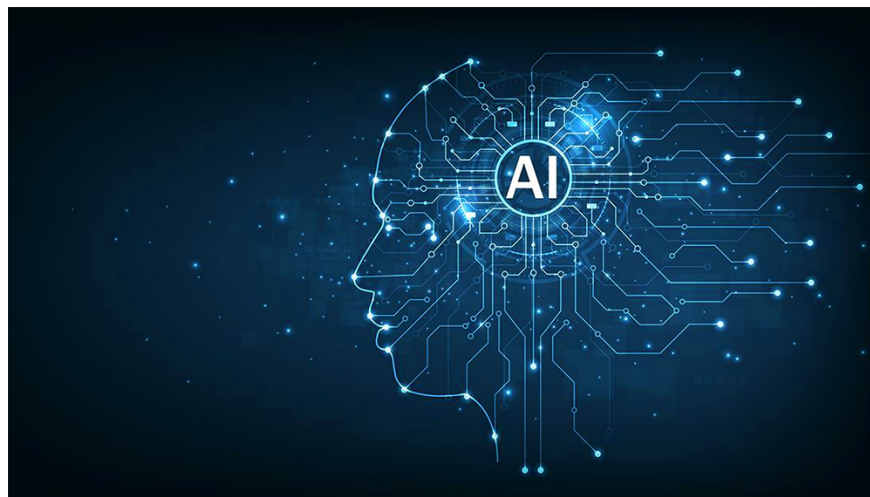
A new AI model called Centaur is attracting attention thanks to its ability to predict and simulate human thinking and behavior with outstanding accuracy of up to 64%.

A new artificial intelligence (AI) model can predict and simulate human thinking and behavior with surprising accuracy. The language model, called Centaur, could help researchers advance our understanding of human cognition.

The model was trained on more than 10 million real-world decisions made by participants in psychology experiments. Using this dataset, Centaur predicted and simulated how humans would think and behave with 64 percent accuracy, the researchers reported July 2 in the journal Nature.

## What is Centaur?

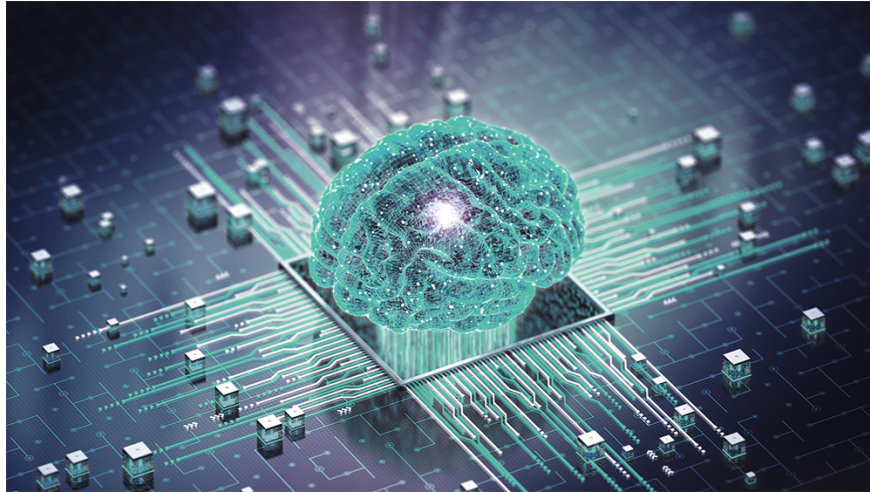
Centaur is an AI model of human cognition that was trained on a curated dataset called Psych-101. The dataset includes data from 60,000 people who made more than 10 million individual choices in more than 160 psychological experiments, according to the report. The researchers say it may be the world's largest human behavioral dataset.



The team then let the model predict what the participants would have chosen in specific contexts. If the model predicted a choice that a person would not have made in real life, the researchers refined the model by tweaking its choices. They repeated this process several times, until Centaur consistently made correct predictions.

When tested against several established AI models of human thinking, Centaur consistently predicted behavior more accurately, according to the study. The model is unique in that it can predict human choices in situations it has not encountered during training, according to a statement from the German Association of Helmholtz Research Centers. Notably, Centaur can also adapt to changing situations and predict human reaction times.

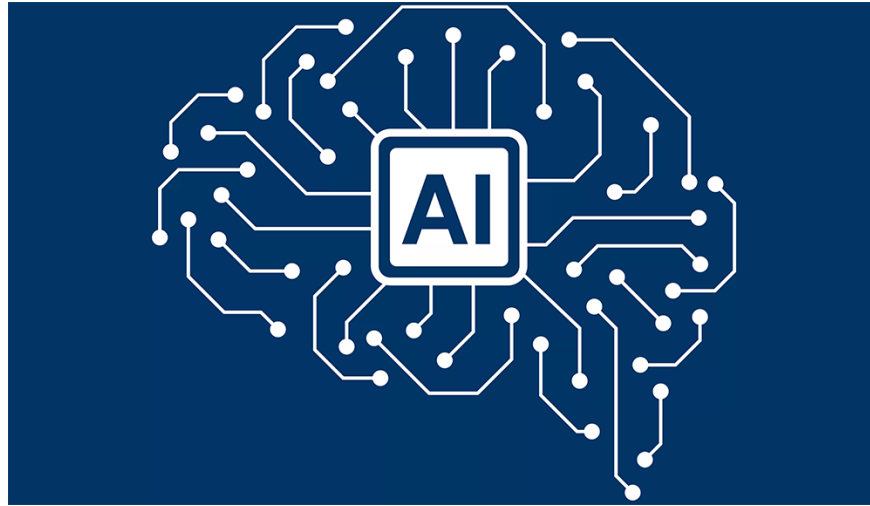
## **Brain research 'on an unprecedented scale'**



Binz and his team plan to continue improving the new model. They hope to expand Psych-101 to include demographic and psychometric data, including age, socioeconomic status, and personality traits, to enhance its training capabilities. These details would allow Centaur to predict behavior based on individual characteristics.

Their next goal is to use Centaur as a medium for the human brain to determine whether some of the patterns they see in the program's data processing correlate with specific decisions. This information could help answer questions about how humans process information and make decisions differently for people with and without mental health issues, for example, the statement said.

Currently, a big unknown is whether Centaur simply predicts human thinking or whether it replicates underlying cognitive processes, with some explaining "Is it modeling human mental processes, or just mimicking the results?"



Centaur opens the door to many innovations in psychology and health research. Applications could include predicting human behavior in a clinical setting or prototyping and analyzing psychology experiments. For example, scientists could use the model to figure out how to design an experiment that best demonstrates a phenomenon or requires the fewest participants.

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