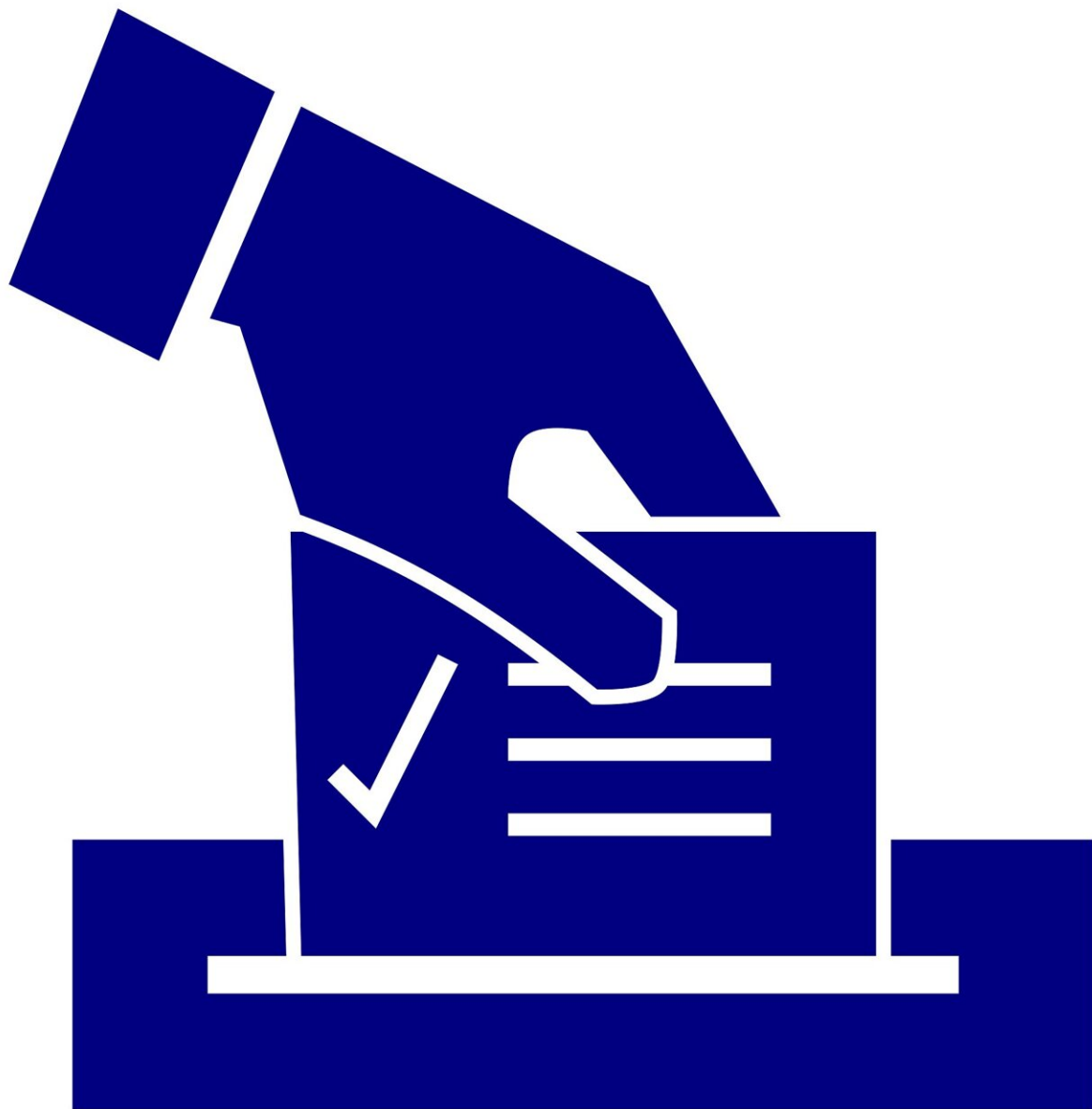


Can AI predict how you'll vote in the next election? New study says yes

March 28 2023, by Tyler Stahle



Credit: Pixabay/CC0 Public Domain

Artificial intelligence technologies like ChatGPT are seemingly doing everything these days: writing code, composing music, and even creating images so realistic you'll think they were taken by professional photographers. Add thinking and responding like a human to the conga line of capabilities. A recent study from BYU proves that artificial intelligence can respond to complex survey questions just like a real human. The findings are published in the journal *Political Analysis*.

To determine the possibility of using [artificial intelligence](#) as a substitute for human responders in survey-style research, a team of political science and computer science professors and graduate students at BYU tested the accuracy of programmed algorithms of a GPT-3 language model—a model that mimics the complicated relationship between human ideas, attitudes, and sociocultural contexts of subpopulations.

In one experiment, the researchers created artificial personas by assigning the AI certain characteristics like race, age, ideology, and religiosity; and then tested to see if the artificial personas would vote the same as humans did in 2012, 2016, and 2020 U.S. presidential elections. Using the American National Election Studies (ANES) for their comparative human database, they found a high correspondence between how the AI and humans voted.

"I was absolutely surprised to see how accurately it matched up," said David Wingate, BYU computer science professor, and co-author on the study. "It's especially interesting because the model wasn't trained to do political science—it was just trained on a hundred billion words of text downloaded from the internet. But the consistent information we got

back was so connected to how people really voted."

In another experiment, they conditioned artificial personas to offer responses from a list of options in an interview-style survey, again using the ANES as their human sample. They found high similarity between nuanced patterns in human and AI responses.

This innovation holds exciting prospects for researchers, marketers, and pollsters. Researchers envision a future where artificial intelligence is used to craft better survey questions, refining them to be more accessible and representative; and even simulate populations that are difficult to reach. It can be used to test surveys, slogans, and taglines as a precursor to focus groups.

"We're learning that AI can help us understand people better," said BYU [political science](#) professor Ethan Busby. "It's not replacing humans, but it is helping us more effectively study people. It's about augmenting our ability rather than replacing it. It can help us be more efficient in our work with people by allowing us to pre-test our surveys and our messaging."

And while the expansive possibilities of large language models are intriguing, the rise of artificial intelligence poses a host of questions—how much does AI really know? Which populations will benefit from this technology and which will be negatively impacted? And how can we protect ourselves from scammers and fraudsters who will manipulate AI to create more sophisticated phishing scams?

While much of that is still to be determined, the study lays out a set of criteria that future researchers can use to determine how accurate an AI model is for different subject areas.

"We're going to see positive benefits because it's going to unlock new

capabilities," said Wingate, noting that AI can help people in many different jobs be more efficient. "We're also going to see negative things happen because sometimes computer models are inaccurate and sometimes they're biased. It will continue to churn society."

Busby says surveying artificial personas shouldn't replace the need to survey real people and that academics and other experts need to come together to define the ethical boundaries of artificial intelligence surveying in research related to social science.

More information: Lisa P. Argyle et al, Out of One, Many: Using Language Models to Simulate Human Samples, *Political Analysis* (2023). [DOI: 10.1017/pan.2023.2](https://doi.org/10.1017/pan.2023.2)

Provided by Brigham Young University

Citation: Can AI predict how you'll vote in the next election? New study says yes (2023, March 28) retrieved 26 April 2024 from <https://phys.org/news/2023-03-ai-youll-vote-election.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.