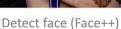


## AI algorithm over 70% accurate at guessing a person's political orientation

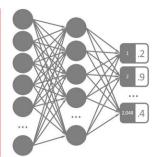
January 14 2021, by Bob Yirka







Crop and resize (224 x 224 pixels)



Extract 2,048 face descriptors (VGGFace2)

Cross-validated Logistic Regression (or other similarity measure)

 $P_{liberal} = 38\%$ 

Compare with liberal and conservative faces

Procedure used to predict political orientation from facial images. Credit: *Scientific Reports* (2021). DOI: 10.1038/s41598-020-79310-1

A team of researchers at Stanford University has developed an AI algorithm that proved to be slightly over 70% accurate at guessing a person's political affiliation after studying a single photograph. In their paper published in the journal *Scientific Reports*, the group describes building and testing their algorithm and how well it worked.

Quite often, people wear hats, <u>t-shirts</u> or buttons to declare their <u>political</u> <u>affiliations</u>, particularly during election cycles. But they may also be announcing their <u>affiliation</u> in ways that they are unaware of—through their facial expressions—at least, according to work done by the team in California.



In this new effort, the researchers built on prior work with an AI system they developed that was better than chance at guessing a person's sexual orientation. This time around, they wondered if <u>facial expressions</u> or posture might say something about a person's political beliefs—specifically, if they were liberal or conservative.

The AI system the researchers built was very much like others designed to learn new information from details that humans don't notice. They then trained their AI system with data from a dating website and other sites that feature user profile photos and political affiliations—the AI system looked for correlations of facial characteristics and head posture with political orientation. They next tested their system with photographs and and the system guessed whether the people depicted identified as liberal or conservative. The algorithm proved to be correct approximately 71% of the time when guessing between similar-looking people and 73% correct when guessing overall.

The researchers were not able to pin down exactly what sorts of facial characteristics their system correlated with political affiliation, but they did find some trends—head orientation and <a href="emotional expression">emotional expression</a>, for example, appeared to provide some clues. People who looked directly at the camera, for example, were deemed to be more liberally oriented. Those showing disgust, on the other hand, tended to be judged as more conservative. The researchers acknowledge that it would be difficult for others to replicate their results accurately because they cannot share the photographic data they used for privacy reasons.

**More information:** Michal Kosinski. Facial recognition technology can expose political orientation from naturalistic facial images, *Scientific Reports* (2021). DOI: 10.1038/s41598-020-79310-1

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