

Timnit Gebru Is Calling Attention to the Pitfalls of AI

The Silicon Valley veteran says big tech can't be trusted to regulate artificial intelligence by itself



Timnit Gebru photographed in Stanford, Calif., February 2023. Nicholas Albrecht for The Wall Street Journal

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By [Emily Bobrow](#)

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As a leading researcher on the ethics of artificial intelligence, Timnit Gebru has long believed that machine-learning algorithms could one day power much of our lives. What she didn't predict was just how quickly this would happen. "I didn't imagine people would be like, 'Let's replace lawyers with a chatbot,' or 'Let's sell AI generated art that looks exactly like someone else's,'" she says over video from her home in California's Bay Area. "I didn't anticipate using chatbots in search engines, which is a bonkers idea that everyone is now racing to do."

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Dr. Gebru, 39, is the founder and executive director of the Distributed Artificial Intelligence Research Institute (DAIR), a nonprofit she launched in 2021 with backing from the MacArthur Foundation, the Rockefeller Foundation, the Ford Foundation and others. Much of her work involves highlighting the ways AI programs can reinforce existing prejudices. "We talk about algorithms, but we don't talk about who's constructing the data set or who's in the data set," she says. Because machine-learning systems adopt patterns of language and images scraped from the internet, they are often riddled with the internet's all-too-human flaws: "If the input data is biased, then the output can amplify such biases."

For years, Dr. Gebru earned notoriety as an in-house AI skeptic at big tech companies. In 2018, while she was working at [Microsoft](#), she co-authored a study that found that commercial facial-analysis programs were far more accurate in identifying the gender of white men than Black women, which the researchers warned could lead to damaging cases of false identification. Later, while working at Google, called on companies to be more transparent about the errors baked into their AI models.

Her work as an AI ethicist at Google came to an abrupt halt in late 2020 over research she planned to publish about the shortcomings of language-based AI programs. She says Google fired her; Google said she resigned, and a representative for the company declined to comment further. She now argues that tech companies can't be trusted to regulate themselves.

Growing up, Gebru says, the drive to be the best 'wasn't a pressure in my family. It was the expectation.'

As a child in the Ethiopian capital of Addis Ababa, Dr. Gebru "was quite a nerd," she recalls. Given her fascination with physics and math, she assumed she would become an electrical engineer, like her two older sisters and her father, who died when she was five. Whatever she decided to do, she felt driven to be the best. "It wasn't a pressure in my family," she says. "It was the expectation."

When war broke out between Ethiopia and neighboring Eritrea in 1998, Dr. Gebru's Eritrean-born family sought refuge overseas. After a detour in Ireland, she joined her mother, an

economist, in Somerville, Mass. Dr. Gebru was already fluent in English and a strong student, so she was surprised when some of her new public school teachers tried to dissuade her from taking advanced courses. Although she recalls earning a top grade in her honors physics class, she says that her teacher suggested the AP class might be “too hard.”

Dr. Gebru went on to study electrical engineering at Stanford, where her experiments with an electronic piano helped secure an internship at [Apple](#) as an audio engineer. She cofounded a software startup—“I felt like I had to in Silicon Valley to get some respect”—before returning to Apple, where she helped develop signal processing algorithms for various products, including the first iPad. When she sensed she was more interested in algorithms than hardware, she returned to Stanford, where she earned her Ph.D. from the AI Laboratory in 2017.

As a grad student, Dr. Gebru was fascinated by the potential of AI. She worked in a lab that used a database of tens of millions of images to teach machines how to deduce a neighborhood’s demographics from its cars: Pickup trucks were popular in more Republican areas, vans correlated with more crime. By the end of her studies, however, Dr. Gebru worried about how these algorithms might be used.

In 2016 she was alarmed by a ProPublica article about how U.S. judges were increasingly relying in sentencing on an algorithm that predicted a criminal’s risk of reoffending. This software typically rated Black defendants who did not reoffend as “high risk” and white defendants who reoffended as “low risk.” “I got into this because I like building stuff,” she says. “But the more I started to do this work, the more I realized I needed to understand those kinds of harms.”



Gebru notes that in the rush to develop AI, tech companies aren't heeding calls to slow down. Photo: Nicholas Albrecht for The Wall Street Journal

Although Dr. Gebru admits that her falling out with Google was stressful—“I lost 20 pounds in two weeks”—she says it clarified big tech’s approach to the ethics of AI. “There aren’t incentives for better behavior,” she says. By launching DAIR, Dr. Gebru says she hopes to offer a voice of restraint at a time when in-house critics may feel silenced: “I think it’s really difficult for people on the inside to push back.”

Dr. Gebru notes that in the rush to create a product that rivals OpenAI’s ChatGPT, which will soon power Microsoft’s Bing search engine, tech companies aren’t heeding calls to slow down. “Our recommendations basically say that before you put anything out, you have to understand what’s in your data set and document it thoroughly,” she says. “But at the end of the day this means taking more time, spending more resources and making less money. Who’s going to do that without legislation?” She hopes for laws that push tech companies to prove their products are safe, just as they do for car manufacturers and drug companies.

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At DAIR, Dr. Gebru is working to call attention to some of the hidden costs of AI, from the computational power it requires to the low wages paid to laborers who filter training data. “In tech we’re very good at pretending that everything is in the cloud, but these models require a lot of people, energy and water,” she says. “The environmental costs can be huge.”

Yet Dr. Gebru wants to make sure that DAIR isn’t merely a naysaying organization. “I didn’t get into this because I wanted to fight people or big corporations,” she says. She points to how DAIR researchers are using thousands of high resolution satellite images to better understand the legacy of apartheid in South Africa, correlating township boundaries with disparities in public services.

“It’s demoralizing to just analyze harms and try to mitigate them,” she says. “We’re also trying to imaginatively think about how technology should be built.”

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