When AI becomes a tool for workplace exclusion

Hiring algorithms are supposed to limit bias, but without critical oversight, the artificial intelligence software can amplify discriminatory mindsets. Meet the people dedicated to making AI more equitable.

By Alisha Green

Pymetrics co-founder and CEO Frida Polli, center, speaks at the McKinsey SCALE Event 2019 in New York City that focused on the demand for human-resources technology. (Photo courtesy of McKinsey & Co.)

Three years ago, the world's largest retailer sparked a swirling storm about gender-biased hiring algorithms. Today technology executives and business professors are still discussing the importance of preventing discrimination in talent acquisition software.

In 2018, [Reuters reported](#) that Amazon had scrapped its experimental artificial intelligence hiring system because it wasn't gender neutral. The hiring tool was meant to rank job candidates for software developer jobs. But since the algorithm was trained on data from resumes of mostly men, the software's takeaway was that men were preferable to women for hiring.

Digital inclusion has been a long-time focus for [Fay Cobb Payton, Ph.D.,](#) a professor of information technology and business analytics at North Carolina State University. In [a research paper published in December 2019,](#) Payton and her two co-investigators released their findings after conducting a critical analysis of algorithmic bias in hiring software.

The three researchers wrote that the lack of women, Black and Latinx professionals in the informational technology workforce "contributes to and is impacted by algorithmic bias," and "algorithms may serve to codify deep-seated biases" in part due to the homogeneity of the algorithm designers and hiring decision makers.

To combat this cycle of inequity, the researchers proposed looking at who is designing an algorithm and who benefits from the mathematical model.

"It's the real question of asking not 'who is involved?' but 'who's not involved that should be at the table,'" said Payton, author of "Leveraging Intersectionality: Seeing and Not Seeing" (Richer Press, 2014).

Fay Cobb Payton, shown in this 2018 studio photograph, is co-author of a 2019 report on algorithm bias. To combat this cycle of inequity, the researchers proposed looking at who is designing an algorithm and who benefits from the mathematical model. (Photo by Creative Silence Photography)

AI hiring technology has been gaining traction for years. A 2018 [LinkedIn report](#) found 67% of recruiters and hiring managers said using artificial intelligence helped them save

time, and 76% of those surveyed predicted artificial intelligence would have at least a somewhat significant impact on recruiting going forward.

But algorithms are only as unbiased as the input design that humans use to create the software: In industries that are male-dominated, for example, an AI algorithm might reflect that historical bias. If men are typically hired and promoted over women, the AI can echo that bias toward men when selecting people it believes would make for top job candidates.

Pymetrics, a technology company in New York, uses behavioral science and artificial intelligence to assess job candidates. Recently, the company released an audit of its screening tool and explained how the software helps to remove bias from its process.

"It is important for the public and job seekers to understand that there are many different flavors of AI," said Frida Polli, co-founder and CEO at Pymetrics. "Some are ethically designed, and some are not."

Polli said she wanted job seekers to have informed consent going into hiring processes that use artificial intelligent software and explain how the gathered data is used. "What we're advocating for is like nutritional labels or calorie labels," she said, "so that the public can inform themselves and be aware when they're interacting with an AI system that is ethically designed versus not."

Pymetrics also supports proposed legislation in New York City requiring a baseline of transparency for the use of talent acquisition algorithms.

The bill would, among other things, prohibit the use of algorithms for hiring unless the tools had been audited in the preceding year to make sure they are not discriminating based on gender, race, or other protected demographic classes under the city's human rights laws.

"It's hard for a company to do its own audits, Polli said, "which is why we're proponents of greater transparency laws."

Lawmakers across the U.S. are examining the issue of bias in hiring software.

In California, lawmakers passed a resolution in August 2019 calling for "ways to promote the development and use of new technologies to reduce bias and discrimination in hiring."

In Illinois, a [law](#) that took effect in 2020 aimed to ensure that people know if a potential employer is evaluating them with artificial intelligence technology and what that software considers when evaluating job candidates.

Algorithmic bias also is gaining scrutiny at the federal level. Ten U.S. senators sent a <u>letter</u> to the Equal Employment Opportunity Commission in December 2020 noting that employers may increasingly use technology to help screen job seekers because of the coronavirus pandemic.

Combatting discrimination in hiring technology, the senators wrote, will require "deliberate and proactive work" from employers and the commission. "Today, far too little is known about the design, use, and effects of hiring technologies," the senators wrote, asking for the commission's insight on what it's doing to help ensure hiring technologies are equitable.

Aaron Rieke, shown in this 2015 studio photograph, says the effects of past biases "are enormous for women and people of color in particular." Rieke is managing director of Upturn, a nonprofit based in Washington, D.C. (Photo courtesy of Upturn)

That letter cited a <u>report</u> co-written by Miranda Bogen and Aaron Rieke for Upturn, a nonprofit in Washington, D.C., focused on advancing equity and justice in the design, governance and use of technology. The report concluded that, without active measures, "bias will arise in predictive hiring tools by default."

Human biases in hiring technologies have effects that "are enormous for women and people of color in particular," said Rieke, managing director at Upturn.

But the fact that there is so little transparency about how hiring algorithms work, let alone when they're being used, makes it difficult for job seekers to know why they didn't advance in a hiring process and what role the AI algorithm may have played.

Given the biases that exist in human-led hiring processes, Rieke said the answer isn't simply to stop using algorithms for hiring purposes. Rather, he said, creating checks and balances between humans and technology will be crucial to developing unbiased and equitable hiring.

This balancing act is a sentiment shared by Payton. "Because algorithms are only as objective as those making those decisions – or creating and implementing and using (the AI) – this is where the developers and organizations using those must step up.

"We all bring something to the table in terms of biases," Payton said, "but how do we mitigate or reduce those in order to have parity and equity in the process?"