

THREE WAYS TO FIGHT BIAS IN MACHINES

Artificial intelligence can replicate human prejudices. Here, technologists offer potential solutions



Safiya Noble, a professor at UCLA (left), Daniel Yanisse, co-founder of Checkr (center) and Rana el Kaliouby, co-founder of Affectiva (right) spoke at The Wall Street Journal's Future of Everything Festival last week. PHOTO: ADAM SHULTZ FOR THE WALL STREET JOURNAL (2); ANDY DAVIS FOR THE WALL STREET JOURNAL



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Artificial intelligence can help automate rote tasks and rapidly process large amounts of data. But technology experts, spurred by a growing body of research, are calling attention to the ways that unchecked AI can reproduce human biases.

Averting bias in AI was central to many conversations at The Wall Street Journal's Future of Everything Festival last week. Here are some of the most provocative ideas for ensuring equality

in the age of algorithms.

Anonymize Data

One way to correct for human biases is to remove photographs and demographic information from data sets, said Daniel Yanisse, co-founder and chief executive of Checkr, which conducts online background checks for companies that rely on gig workers. He cited Airbnb Inc. as an example. After some Airbnb users said that hosts would not rent to them because of their race or sexual identity, the company last year moved to display renters' photos only after hosts accepted their booking requests.

Although Checkr's platform doesn't include pictures of job applicants or track demographic data, it's still possible for human prejudices to affect who gets hired. An applicant could have a criminal conviction, but the circumstances of the conviction aren't shown to potential employers. "A judge could be biased, then the decision of justice could be biased as well," Mr. Yanisse said.

Use Diverse Data (and People)

Another way builders of algorithms can address bias head-on: know what data is training your AI, and ensure that it reflects the diversity of the population, said Rana el Kaliouby, the co-founder and chief executive of Affectiva, which builds technology to read human emotions.

Machine learning is fed by information, but if the information is not correct or complete, the algorithm won't work properly. For example, a facial-recognition algorithm without enough examples to draw from may misidentify faces of one race or gender.

One way to avoid this, Dr. el Kaliouby said, is for companies that build the tools to hire people from different populations, as they may be more likely to notice and correct for underrepresented groups in their data. "It's really critical that the team of people that are designing these algorithms be diverse as possible," she said.

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Affectiva is planning to augment its machine-learning system, which parses pictures of people's expressions, with data from Africa, Asia and South America, Dr. el Kaliouby said.

Fund Technology Education

In an age when search engines and social media surface false information, internet users must demand “factual and just information as a pillar of democracy,” said Safiya Noble, a professor at the University of California, Los Angeles, and author of “Algorithms of Oppression: How Search Engines Reinforce Racism.” Lawmakers and

consumers have called for increased regulation of social media and tech companies. But any rule-making should be accompanied by funding for public education, higher education, libraries and public media, Dr. Noble said.

Even grade schoolers can benefit from education on what AI can and cannot do, said Blakeley H. Payne, a researcher at MIT Media Lab who launched a pilot program last year to teach middle-schoolers how to be conscious creators and consumers of AI. “We cannot wait on them to grow up” to begin shaping them into informed citizens, she said.

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