

Camps teach students how to fight racial bias in artificial intelligence

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Stanford AI4ALL participants on their first day of class. Photo by: Stanford AI4ALL/Anna Wong

OAKLAND, California – High school students Aarzu Gupta and Lili Sun, through connections made at summer camp, used artificial intelligence to create a drone program to detect wildfires before they spread far. A drone is a small aircraft flown by remote control.

Artificial intelligence (AI) involves computer systems doing tasks that usually require human intelligence, such as making decisions.

Rebekah Agwunobi, a high school senior, learned enough to nab an internship at the Massachusetts Institute of Technology (MIT) Media Lab. She worked on using AI to evaluate the court system, including collecting data on how judges set bail.

Both projects stemmed from the Oakland-based nonprofit AI4All. It will expand its outreach to young underrepresented minorities and women with a \$1 million grant from Google.org, the technology giant's charity arm announced August 10.

AI is becoming increasingly commonplace in daily life. It's found in everything from Facebook's face detection for photos to Apple's iPhone X facial recognition.

The Risk In Using Unchecked AI

It's also one of the more disputed parts of technology. The late scientist Stephen Hawking and Tesla chief Elon Musk have warned human civilization is at risk from the unchecked development of artificial intelligence, which could lead to self-ruling weapons of terror.

The technology, still in its early stages, has also been criticized for built-in racial bias that can amplify existing stereotypes. That's worrisome as more companies use it for decisions such as hiring and police leverage AI-powered software to identify suspects.

MIT Media Lab researcher Joy Buolamwini, who is black, found facial recognition software could more easily identify her face when she wore a white mask. It was a result of computing rules that relied on data sets of mostly white faces.

Three years ago, Google apologized after its photo identification software mislabeled black people as gorillas. Even if the machine doesn't know what it's doing, this racist association has been used throughout history to say that black people are not human.

Microsoft also apologized after users quickly found a way to get an artificial intelligence-powered social chatbot to spew racial slurs. Chatbots are computer programs to simulate conversation with people.

Underrepresentation Of Women And Minorities

Tess Posner is the chief executive officer of AI4All. She said the problem is made worse by the fact that minority groups such as women and people of color historically have been left out of the tech industry, particularly in AI.

"We need to have people included that are going to be impacted by these technologies, and we also need inclusion to ensure that they're developed responsibly," Posner said. "Bias happens when we don't have people asking the right questions from the beginning."

Despite stated efforts to attract more women and more people of color, Google, Facebook and other tech giants have been slow to diversify their staff, and have not hired many women of color. African-American and Hispanic women make up no more than 1 percent of Silicon Valley's workforce.

Nonprofit Teaches AI To High School Students

Posner's organization believes the tech industry has to start including women and people of color at a much earlier stage. They're working to close that gap through summer camps for high school students.

AI4All, launched in 2017, is based on a two-week summer camp program out of Stanford University in Palo Alto, California.

Since then, AI4All's resources have expanded. In its first year, there were only two summer camps at Stanford University and the University of California at Berkeley. This year, it added four more at other colleges.

All of the camps are aimed at high school students who are women, people of color or low income.

Part of Google.org's grant will go toward opening more AI4All camps. The ultimate goal is to use the money to create a free, online AI course that will be accessible to anyone in the world. A course is already in the works.

"We really need for AI to be made by diverse creators, and that starts with people having access to the learning opportunities to understand at its core what AI is and how it can be applied," said Hannah Peter. She is Google.org's AI4All partnership lead.

In addition to providing summer camps, AI4All offers three-month fellowships where students can develop their own ideas and pitch them to AI experts in the industry. There is also funding for students to launch independent projects.

Creating Meaningful Projects

One such project was former AI4All student Ananya Karthik's workshop, creAIte, which uses artificial intelligence to create artwork.

Other AI4All students, most still in high school, have turned their newly acquired technical skills toward current pressing issues, such as the wildfire project developed by Gupta and Sun. The two met during an AI4All fellowship this year. This idea came out of the fires that plagued northern California late last year.

Gupta and Sun appreciated the camp's talks featuring real-world examples of minority women who were able to succeed in the tech industry.

"I want to initiate change using artificial intelligence," Sun said. "I don't want to be just working on an iPhone or something like that."

Because of her experiences, Gupta said, she's looking forward to exploring a career in AI, particularly in its uses for health and medicine. She's already putting that interest to work with her internship this summer at the University of California at San Francisco, where the lab she's working at is doing research on Alzheimer's disease.

For Agwunobi, AI4All showed her how she could combine her passion for activism and social justice with her interest in technology.

At her MIT internship, Agwunobi took data gathered during the pretrial process to evaluate how key figures such as judges behave while setting bail. The goal is to arm activists with this data when pushing for prison and bail changes.

"You can work with tech and still be accountable to community solutions," Agwunobi said. AI4All "affirmed my desire to solve interesting problems that actually helped communities," she said.