AI

Report: AI jobs are growing fast—much faster than education and workforce policy

The Center for Security and Emerging Technology published top to-dos for policymakers

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Francis Scialabba

Soon, parents all over the world will be asking their adult kids: Why didn't you go into a career in AI?

In 2019, the AI workforce made up 9% of total US employment. And over the next decade, employment in AI-related occupations is projected to grow twice as fast as employment in all occupations, according to data from the Bureau of Labor Statistics.

But there's a problem with this rate of growth: Education and workforce policy haven't caught up. Though the skills gap likely isn't as broad as is widely believed, it still exists for some aspects of the AI workforce—and more than that, there's a general lack of education about open roles, according to a new paper from the Center for Security and Emerging Technology (CSET), a

Georgetown University–based think tank.

"As we think about a world characterized by AI ubiquity, or where AI is deployed on a wide scale, these are tremendous job opportunities for people who maybe don't need a college degree," Diana Gehlhaus, a CSET research fellow and coauthor of the paper, told us. "When you think about future job opportunities that pay well, that are going to promote our competitiveness and also your financial security, these jobs bubble up to the top."

State of the union

Before making recommendations, CSET researchers set aside four months to analyze current AI-education offerings in the US—looking into related curricula, after-school programs, summer camps, federal initiatives, and more. They also interviewed leading AI companies to get an idea of future demand and hiring, though CSET declined to specify which companies.

The researchers found that right now, a dedicated AI education and workforce policy simply "does not exist." In fact, they wrote, what we have "is piecemeal and based on inconsistent definitions of the AI workforce."

But new legislation is in the works, Gehlhaus told us. The researchers' findings are aligned with proposals in the bipartisan US Innovation and Competition Act, which could authorize more funding for the NSF and education and training in AI, if the House and Senate versions of the bill can be successfully negotiated.

Gehlhaus hopes that the CSET paper will "double down on validating the merit of that legislation," she said.

Plan of action

One of Gehlhaus's main goals for the research? To underline the differences among science, technology, engineering, and math education versus programs specific to AI.

"I kept saying this over and over and over and over to my boss: I do not want another report that says we need to invest more in STEM education," Gehlhaus said. "What does investing in STEM education actually consist of...and what mechanisms do you need to actually reach youth of all different backgrounds and interests? Because again, this is a really nuanced conversation. So just saying, 'Investing more in STEM'...If I'm a staffer on the Hill, it doesn't necessarily help me. It's very broad."

That's because it's tough to evaluate where all that funding is going in an organized way, Gehlhaus told us, drawing a parallel to federally-funded employment and training programs. It's "an example of how 'throwing money at it' alone does not get the job done without coordinated policy," she said.

The researchers' top three takeaways for policymakers? The US needs to increase its supply of AI PhDs since research suggests there's a supply-demand gap for top-tier talent; "sustain and diversify" pipelines for technical AI roles; and introduce AI education into K-12 curriculums.

Getting organized

CSET researchers recommend leveraging the power of the education and training division of the National AI Initiative Office to be a star AI policy coordinator.

The office should 1) organize federal and state initiatives 2) bring area leaders together to share "best practices" for state-level AI

education programs, and 3) publish resources for AI education and careers on a "publicly available AI dashboard," researchers wrote.

And then there's the fact that AI jobs include non-technical work—think roles like project manager, user experience designer, or marketing manager. CSET researchers believe it's important for kids and young people to know that even if they aren't interested in coding, there are available roles for them.

Although a four-year college degree is the most common route into AI roles, that path also restricts incoming talent. The researchers recommended that AI-education initiatives should leverage the talent at community and technical colleges and minority-serving institutions (MSIs), as well as historically black colleges and universities (HBCUs). They added that the National Institute of Standards and Technology should work to instate AI certifications, and related certificate programs, to allow alternate pathways into

the career path.

Much of the research—and the recommendations themselves, Gehlhaus added—come down to encouraging a broad and diverse AI talent pipeline.

"This really does get into the fact of: What do you want to be when you grow up?" Gehlhaus said. "Nobody says data scientist, right? Nobody says, 'I want to be an AI researcher'...We want to make sure that everybody has an opportunity, not just the people who fit in the four-year-college mold."

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