Harnessing a smart revolution

Digital technologies are an integral facet of human existence, changing how we find information, the way we communicate and even our behavior. This transition applies to education as well, with the continued growth of artificial intelligence (AI) reshaping the higher education landscape at two- and four-year institutions alike.

AI is paving the way for a more sophisticated and future-proof workforce, a reality gradually being embraced by community college administrators. The ongoing pandemic has illustrated the benefits of AI, forcing educators to rely on technology for virtual learning.
Two-year colleges are addressing the AI skills gap with new workforce programming, casting ahead to a future where the technology is even more ingrained into daily life. In August, chip manufacturer Intel expanded its AI for Workforce Program at 18 community colleges across 11 states, offering completers a certificate or associate degree for jobs ranging from nursing to business.

“AI is one of the superpowers fueling innovation, economic growth, job creation and advancements across every aspect of society,” Intel CEO Pat Gelsinger said in a press release. “The next-generation workforce will need skills and training in AI to develop solutions to the world’s greatest challenges, and community colleges play a huge role in unleashing innovative thinking.”

Individual colleges are helping educate the next group of technologists, engineers and inventors as well. Miami Dade College (MDC) received a $1 million National Science Foundation grant in August to fund development of interdisciplinary AI courses leading to a college credit certificate.

The college is providing industry-based faculty training to support and pilot AI courses, with integration of AI into existing curriculum a longer-term goal, says Antonio Delgado, vice president of innovation and technology partnerships at MDC.

“We’re looking at artificial intelligence from an applied perspective to meet workforce needs both today and down the line,” says Delgado. “You can go back 25 years when everyone needed to learn about computers. Now we’re looking into the next generation of digital skills.”

MDC’s four-year grant will be implemented in collaboration with the University of Florida, Texas A&M University-Commerce and nonprofit organization AI4ALL. On the industry side, the college is receiving backing from companies including IBM, AWS and Microsoft.

Miami is home to a burgeoning population of investors and successful tech founders, buoyed by a local government eager to make the city a major startup hub. These new companies will need a trained workforce, even if they can’t immediately afford PhDs deriving from top science schools.

“It’s about those applied roles in AI — we need companies to be flexible on the AI adoption,” Delgado says. “From business managers who understand how to create and
manage AI technician positions to HR personnel who will use the technology to be more effective in their jobs."

**Keeping a competitive edge**

AI is an area of computer science covering development of software applications that simulate thinking, discover meaning, and make decisions through complex and dynamic data. Supporters point to an endless suite of innovations made possible by AI: self-driving cars, robots, facial recognition technologies, big-data analysis and more. Advanced AI systems also compose text, audio and images to such a high standard that observers have difficulty determining the difference between human and computer-generated output.

As the technology advances, the higher education realm is taking notice. According to the Computing Research Association, about 65% of graduating North American doctorate degree-holders in AI went into industry, up from 44.4% in 2010. Meanwhile, an AI Index survey conducted in 2020 reported a 41.7% uptick in undergraduate-level AI courses as compared to the four previous academic years.

[Read the full article](https://www.ccdaily.com/2022/01/harnessing-a-smart-revolution/) in the new December/January issue of the *Community College Journal*.  

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