



INSIGHTS REPORT

Making Your Campus AI Ready: How tech infrastructure is evolving



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Verizon on AI Readiness

Is your campus ready for AI?

The question defies an easy answer. After all, readiness varies, from smaller colleges beginning to explore its potential to research-focused universities deeply engaged in AI. But no matter where your institution is along its AI journey, one thing is clear—you need a reliable, secure network. Because AI boosts network traffic and creates new risks.

Verizon helps colleges and universities bring AI to campus successfully and safely, with our range of networking solutions, which provide world-class security, agile performance, and dynamic flexibility. We can help your institution:

- **Set objectives.** Clarifying your goals for AI and identifying use cases right from the start helps right-size your network and ensure its ongoing success.
- **Modernize your network.** Our secure, high-capacity connectivity can handle ever-escalating AI workloads. But there is no one-size-fits-all network solution. That's why our portfolio includes options that let you match your existing infrastructure and goals. To prevent service interruptions, we help you implement business continuity and network redundancy.
- **Augment your IT resources.** As a managed services provider, Verizon can bring our external expertise to your IT team, augmenting and expanding its capabilities. This approach enables you to adopt new technology without requiring extensive internal structural changes.

To strengthen your AI readiness, we're pleased to support this special report from The Chronicle of Higher Education, *Making Your Campus AI Ready*. It's a great resource for anyone seeking insights into the technical and organizational challenges posed by this transformative technology.

For more about Verizon AI solutions for higher education, [visit our website](#).



A handwritten signature in black ink that reads "Patty Roze".

Patty Roze
Vice President, Public Sector Sales, Verizon

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Contact CI@chronicle.com with questions or comments.

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The advent of generative artificial intelligence has raised countless questions regarding ethics, pedagogy, efficiency, and cost. But what's less talked about is one of the most basic challenges — how colleges will technologically support AI's powerful computing needs.

The requirements and resources of well-financed institutions, especially large research universities (R1s), are far different from more underfunded colleges, and that will largely determine the paths they take in incorporating AI into their work.

“The successful adoption of AI demands a staggering array of resources and capabilities — funding, staffing, leadership, strategic and

operational resilience, technology and data infrastructure, and some institutions more than others have those resources and capabilities readily at their disposal,” notes “Into the Digital AI Divide,” a 2025 [survey](#) by Educause, a nonprofit that supports technology in higher education.

But what is true for all higher-education institutions, no matter their size or mission, is that the decisions that leadership and tech teams make regarding the technology they choose can affect all corners of campus life: security, privacy, budgets, and equity. In addition, those decisions raise questions about the increasing influence of technology companies in academe.

Technology infrastructure has rarely been considered sexy and too often is ignored until something goes badly wrong, but “AI has made it a five-alarm fire,” says Dave Irvin, who served as head of facilities at various universities for many years and is now a consultant with the National Association of College and University Business Officers (NACUBO). “Can we upgrade the infrastructure fast enough, and can we afford to do it to embrace the things AI might allow us to do?”

That leads to the next question: *Should* they embrace it? For many chief information officers, the emphasis in higher education needs to switch from bringing on board as many AI tools as possible to questioning how their particular institution will use and manage them sustainably.

“We need to have those conversations about the appropriate use of the technology,” says Joseph Kalinowski, vice president for information technology and chief information officer at Clark University in Worcester, Mass. “Yeah, it can do a whole bunch of things, but should it? And how do we want to use it? And what guardrails do we put in place? Because at the end of the day, if it does something that we don’t want it to do, we’re responsible for it.”

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SECTION 1

‘An Arms Race’





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The University of Michigan, a prestigious R1 institution, exemplifies what this new world of generative AI can look like in one sector of higher education.

In 2023, Michigan touted itself as the first university in the world to offer a “[custom suite](#)” of generative-AI tools developed in-house — including a chatbot known as “Go Blue” — to students, faculty, and staff members.

The university’s AI toolbox continues to evolve, especially with the advent of agentic AI. One important focus of the technology team in 2026, says Ravi Pendse, vice president for information technology and chief information officer, is providing high-performance computing resources for the \$2.16 billion of research the university conducts annually.

A large part of that computing power includes graphics processing units, or GPUs, which are

specialized electronic circuits composed of many types of microchips that can do multiple tasks in parallel. They were initially used mainly in gaming, but they are becoming increasingly popular and necessary — and expensive — with the growth of generative AI.

“Think of it as a massively complex but massively powerful system that runs a lot of problems at the same time,” Pendse says.

For example, he says, the use of GPUs has allowed neurosurgeons working at the University of Michigan’s hospital to take continuous imaging of the brain during surgery. The images are sent to Michigan’s data center, where they’re analyzed by high-performance computing and AI tools, in real time. That information is then sent back to the surgeons in fewer than 10 seconds, while the patient is still on the table. Being able to see such images allows the surgeons to remove far more of a tumor than in the past.

In response to the growing need for such high-powered computing, the university is partnering with the Department of Energy's Los Alamos Laboratories to [build a data center](#) that will house computers to be used for academic and national-security research. No final location has been chosen for the proposed \$1.2-billion site — [although published reports name nearby Ypsilanti](#) — and it is expected to be completed by 2030.

"It's definitely a challenge for us, but we have been planning for it for a while," Pendse says. "AI has accelerated the speed of investments we have made."

Like other places around the country, where communities are opposing the construction of data centers, the Michigan center has been [dogged by critics](#). At 300,000 square feet, it would be much smaller than many of the mega data centers, which can run to [tens of thousands of acres](#), currently being proposed and protested — but it is still a concern to many who fear the environmental impact and the ties to military and nuclear research.

The center will provide up to 10 megawatts of electricity dedicated to computing. To illustrate how rapidly demand — primarily from the use of AI — is growing, Pendse notes that just a few years ago, the university used one megawatt of power. Today that figure is about four, he says, and even 10 megawatts may not be enough to meet all the demands by 2030, much of it driven by AI research.

Since the university needs more computing power than its current data centers can provide, it will be renting a "bridge" data center until the new one is completed, Pendse says.

"The demand has suddenly gone up so much," he adds, "that literally every meeting I have with our dean of engineering or chair of computer science, the first question they ask is, 'When are you going to give me more GPUs? I need more GPUs. I cannot recruit faculty without more GPUs.'"

And the cost of that has become increasingly expensive, as massive demand for chips, which make

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up GPU devices — particularly by the big tech companies — has driven up prices for everyone.

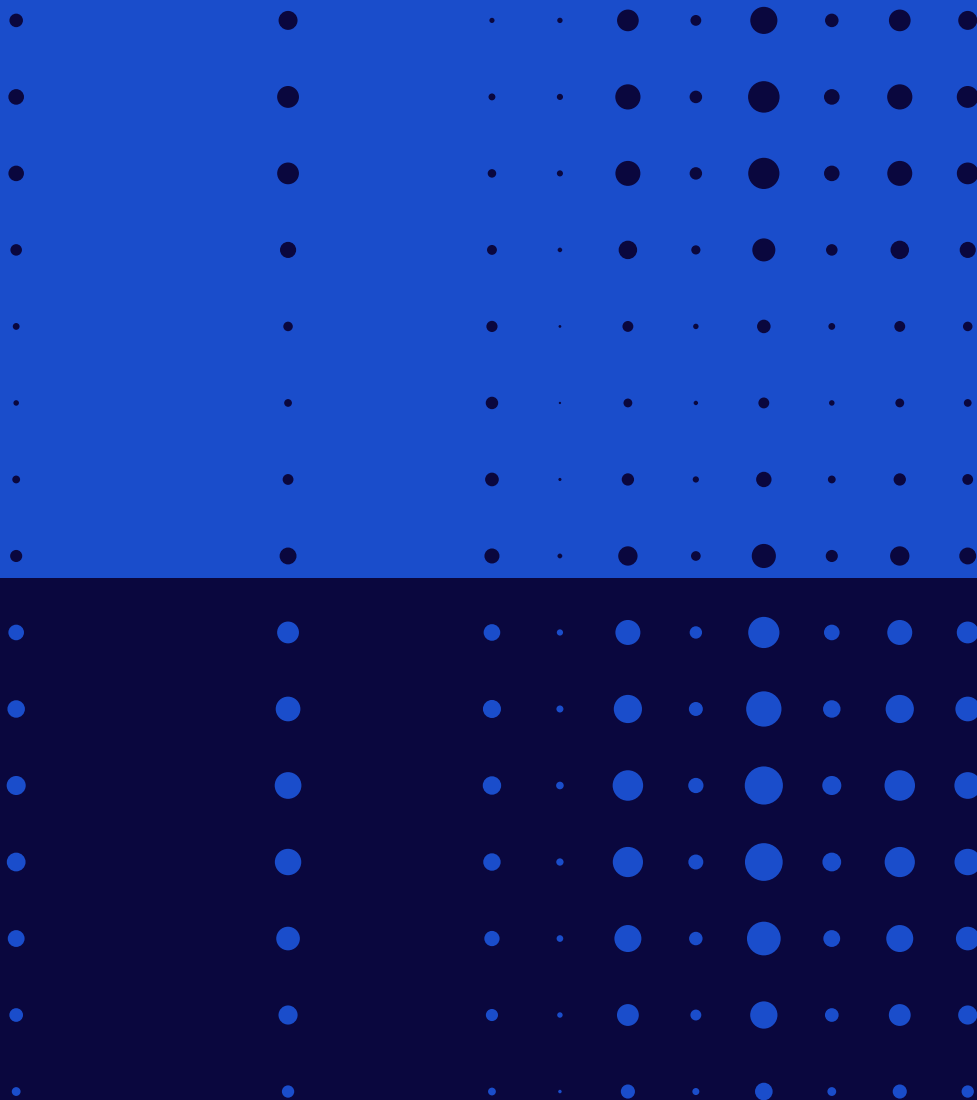
Michigan is hardly alone. The Texas A&M University system, which [includes](#) 12 universities, a health center and eight state agencies, just announced its new "[Vision](#)" [supercomputer](#) and is planning for another, "Ignite," to go online in six to eight months, says Vince Kellen, chief information officer for the university system. Funding for both of them was about \$100 million, he says, and they will be based at A&M's flagship campus but will be available for use by the whole system.

Currently, the system's data centers are university funded, but "in the future, we have to find co-funding opportunities with industry in order to afford the technology, to afford the purchase of it, and to afford the repurchase of it when it expires in five years, when it's no longer useful," Kellen says. "It's an arms race with R1s."

For example, with generative and agentic AI, scientists can accomplish in weeks what used to take months, Kellen says, "so they're able to produce their research findings faster, which means they become more attractive to federal agencies who want to fund them further."

SECTION 2

Doing More With Less





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For many colleges, however, building big data centers is not even an option. “Most institutions are struggling to try to stay financially solvent, the IT budgets are not rising, and yet they’re being asked to do a lot — and you’re talking about some pretty hefty expenses,” says Michael Zastrocky, executive director of The Leadership Board for CIO’s in higher education.

Jodie Penrod, the chief information officer at Marshall University in Huntington, W. Va., which became an R2 university in 2019, knows that situation well.

Right now Penrod is working with campus leaders to figure out the best way to restructure their technology to allow staff, faculty, and students to fully integrate generative AI in their work.

Over the years, for example, Marshall’s business-process data has been customized in various ways that make it difficult to use with AI.

Marshall subscribes to Software as a Service (SaaS), a cloud-based software subscription model offered by various companies, for some of its data systems. Others, including its enterprise resource planning (ERP) system, are hosted partly on campus and partly in the cloud rather than through a SaaS provider.

That matters because SaaS vendors are responsible for all software upgrades, Penrod explains; whereas systems that are not part of the SaaS model are the responsibility of the institution. The big question facing Marshall and many other colleges is whether to move its entire technology infrastructure to SaaS.

For many colleges, moving to SaaS will be “a big shift — they have to be willing to take standardized processes to fully realize the value of AI.”

“I definitely think that has to be part of a consideration in the next three to five years, especially if a university wants to scale AI in a meaningful way,” Penrod says, adding that a full transition would be a multiyear effort that would cost millions of dollars.

Another difficulty: Marshall, like many other institutions, has customized its data, codes, and workflows for its specific institutional needs. SaaS typically requires more standardized data, processes, and workflows.

For many colleges, moving to SaaS will be “a big shift — they have to be willing to take standardized processes to fully realize the value of AI,” says Michael Wulff, chief product and technology officer for Ellucian, a software and services company focused on higher education. That’s because the less AI has to reason — that is, the more uniform the data is — the more effective AI is, he says.

According to Wulff, about 25 percent of the approximately 3,000 higher-education institutions Ellucian services are using SaaS for some or all of their technology needs.

Pima Community College in Tucson, Ariz., started its data migration to SaaS in October; the project will take 18 to 24 months to complete and had an initial investment of \$2.4 million, says Isaac Abbs, assistant vice chancellor and chief information officer.

Eventually, he says, the move will pay for itself, because annual costs will be less than the college is paying for their current data warehouse. But it’s not just about money. “This is part of our overall infrastructure modernization, our big digital transformation,” Abbs says. “The goal is to be in a modern platform that natively supports AI tools.”

A major problem for CIOs trying to determine a path forward is that costs keep changing. In a 2026 [survey](#) of CIOs/CTOs by *Inside Higher Ed*, one of the highest-ranking concerns expressed by respondents was the “unsustainable cost trajectory of technology services.”

For example, an estimate for lifecycle replacement of a portion of Marshall’s server infrastructure — typically done every five to seven years — rose from \$250,000 to \$750,000 over a month because the use of generative AI has greatly increased the demand for random access memory (RAM) storage.

For Marshall, “initially it was cost-prohibitive to move all our technology to the cloud — it was cheaper to actually buy the equipment,” Penrod says. “But now it’s more expensive to buy the equipment than move to the cloud, so we have to rethink the whole strategy.”

The plan now, she says, is to have a hybrid model of data both in the cloud and on premises, or “on-prem” as it’s called. This hybrid model may become more common, for cost as well as security and privacy reasons, says Ernesto Lee, an assistant professor of artificial intelligence computer science at Miami Dade College.

“Where a lot of CIOs and CTOs have settled is, regardless of what happens with the AI innovation space, we absolutely at a minimum need to own and control our own data,” he says. “So, let’s have an on-prem solution where we own our data. We have an LMS out there, but the student data that’s in the LMS is in our servers that we own

and control. We have an HR system that's out in the cloud, but we need to have all of our employee information in our system locally."

Clark University is one of those hybrid institutions, and Kalinowski, its CIO, is grappling, like so many of his peers, with the unknown.

"We're seeing increases in RAM costs that haven't been built yet for data centers that haven't been created yet for applications that don't exist yet. It's hard enough to deploy and manage technology in higher education, never mind the technology suite in the cloud that changes every other day," he says.

An added concern for colleges: the cost of tokens, which is what tech companies call the units of processing power they sell. Colleges typically bought tokens for the use of faculty, staff members, and students from these companies through a flat subscription service. But even as the price of tokens have fallen, demand has skyrocketed, making them [increasingly expensive](#) — and the system of unlimited usage for a monthly service seems to be coming to an end. So institutions are struggling to figure out ways to afford and distribute tokens equitably across their community.

Another challenge facing most colleges is under-resourced tech teams — even as generative AI pushes tech teams to learn, and teach, new skills. The common refrain from CIOs is, "we need to do more with less."

The top concern of respondents to the *Inside Higher Ed* survey was an inability to recruit or retain qualified IT teams. Only 27 percent are increasing compensation, "highlighting underlying cost constraints," the survey notes.

Not only are more staff members needed, but so are more staff members who know — or who can quickly acquire the skills — to understand new processes and demands. The 2026 Educause ["Workforce Report"](#) on tech teams adapting to AI found that AI skills "are both a top priority and growing gap."

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"If your staff was pretty good at making sure that your email server was running and making sure that people had accounts, that's a very different thing than making sure that one student doesn't use all of the resources that your entire research group has," says Jeff Forbes, director of broadening participation in computing initiatives for the nonprofit Computing Research Association.

In addition, tech teams are increasingly responsible for guiding the campus community on which AI tools are needed and how they can be used — while still being on call for immediate needs.

"It's really difficult for them to be able to spend the time and human resources to thoughtfully plan for this," says Sean Burns, a corporate researcher at Educause.

That planning, of course, has to include how to protect the data; cybersecurity is a major worry for every technology leader. That is particularly true after the April and May [hacks](#) of the educational-technology company Instructure, the parent company of Canvas, which caused widespread disruptions and outages.

Hackers demanded ransom in exchange for the data they stole from Canvas — data from about 9,000 colleges and K-12 schools worldwide. The company paid an undisclosed amount to prevent the leak of the confiscated data.

That speaks to reasons to keep data on campus, says Robert J. Clougherty, the AI lead for the Alliance for Innovation and Transformation. “As you begin putting it into other, especially larger, repositories, it increases the value and the attraction to hackers. That’s what happened with the Canvas hack. I mean, all of a sudden 41 percent of data is there.”

But many CIOs and CTOs are not very confident about their own institution’s cybersecurity and privacy policies. According to Educause’s Landscape survey, only 9 percent of respondents reported that these policies are adequate to address AI-related risks to the institution.

And of the 30 survey respondents who identified as cybersecurity and privacy professionals, none reported that their institution’s cybersecurity and privacy policies are adequate.

That’s why Abbs, of Pima Community College, says he has more confidence in a large company protecting his college’s data.

Such companies, he says, “have way more resources and better overall security professionals than we would ever be able to have here.”

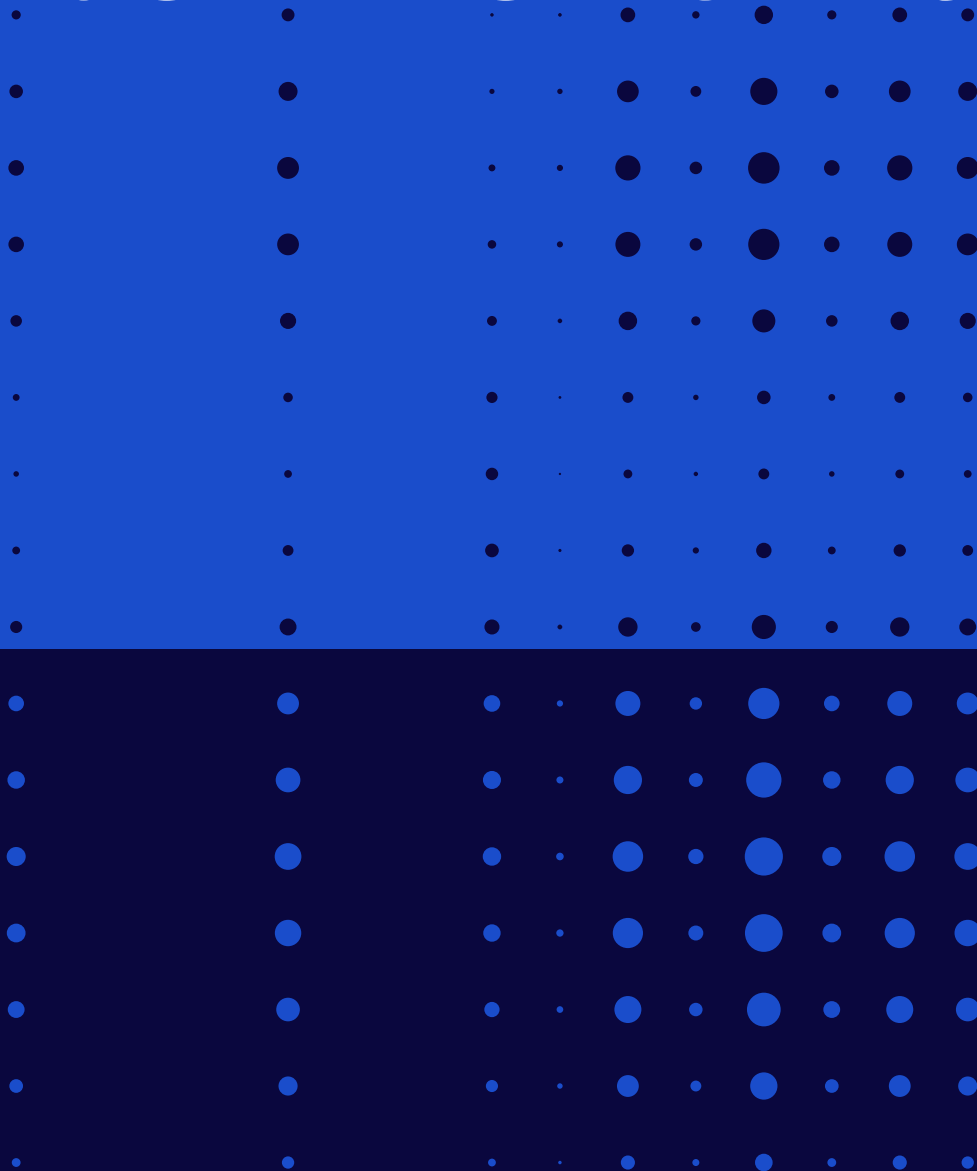
The reality is that higher-education institutions, for cost reasons, are signing up for large system-level enterprise licensing with proprietary models

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from big AI companies because building tools themselves “is impossible financially for the vast majority of institutions,” says Prem M. Trivedi, director of open technology at New America, a public-policy think tank. “That means you have vendor-reliance and vendor-concentration problems. Whether it’s a cybersecurity breach or negligent or active data mismanagement by the vendor, it’s going to put a whole bunch of institutions, and then the vulnerable populations within them, at cascading risk.”

SECTION 3

The Pressure to Move Fast





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Conflicting demands from the complicated nexus of trustees, administrators, students, and faculty and staff members that exist on every campus are nothing new in higher education. And AI is no exception — except that the speed of its development, the hype surrounding it, and the potential costs and risks involved, create even more pressure on CIOs and CTOs to move, and move fast.

“We are getting that pressure, we’re getting it from families, we’re getting from alumni, we’re getting it from the Board of Trustees,” says Khaleel Gathers, vice president of information technology for Colorado College. “They are asking us, what are we doing for our students? How are we preparing our students for a future with AI in it?”

Campus leaders and trustees are also eager to reap the promised benefits of AI’s efficiency and cost-

savings. And it’s easy for tech leaders to look over at what other institutions are doing and feel like they’re falling behind. “Peer pressure is a major thing,” Michael Zastrocky, the executive director of The Leadership Board for CIO’s in higher education, says.

But bowing to that pressure could lead higher education to “repeat the errors of the software age,” Clougherty, of the Alliance for Innovation and Transformation, warns. “Back in the 1990s and early 2000s, people just started buying technology without a centralized plan, without a sense of ROI — and they’re still paying the price for it, because there are all these diverse systems.”

While choosing to totally opt out of AI is not a possibility for most colleges, figuring out how it fits in with an institution’s needs and mission — and how to protect it — is crucial before going on a buying spree.

“One of the biggest things that most institutions overlook is whether or not AI is something that aligns morally or ethically with their goals and visions,” Gathers says. “We often grapple with whether or not we should even be embracing AI. We have to start there before we even look at investing in infrastructure.”

At Colorado College, the concerns from faculty members and students include how using AI would affect the authenticity of the instructor experience, the climate impact of electricity needed to power AI and water to cool computing, and the role of the large tech companies.

Gathers and others say that what is also key is data governance. This is far from a new issue in higher education but the growth of AI on campuses has brought it into sharp relief. As Wulff of Ellucian says, the value of AI will only occur “when paired with the parallel investment in data quality.”

That’s why Colorado College has decided to get its data in order before rushing to invest in AI.

“Right now, we have a lot of disparate systems across the institution, so we have to centralize our data,” Gathers says. “One of the priorities is to ensure that there’s high-quality data. We are building the foundation to enable AI tools across the institution, not only responsibly, but sustainably.”

But data governance is not keeping pace with AI adoption. According to the *Inside Higher Ed* survey, nearly four in 10 CTOs (39 percent) say their institution is significantly more reliant on AI than a year ago, and 49 percent now consider generative AI a high or essential priority (up from 34 percent). Relatively fewer, 31 percent, report strong data-governance structures for AI, and just 28 percent believe their institution is handling AI adeptly.

“We are getting that pressure, we’re getting it from families, we’re getting it from alumni, we’re getting it from the Board of Trustees. They are asking us, what are we doing for our students? How are we preparing our students for a future with AI in it?”

Bharathwaj Vijayakumar, Rowan University’s assistant vice president of institutional data and analytics and Samyukta Alapati, director of institutional data and analytics, wrote about “the promise and pressure of bringing AI into higher-education systems” in a recent [case study](#). They learned that their governance structures will need to change as AI becomes more embedded in daily work.

“Traditional data governance focuses on accuracy, access, and security, but AI introduces dimensions such as how models reason, how they explain themselves, and how people interpret their responses,” the authors wrote. “Managing these dimensions requires a cross-functional AI governance group that can bring together technical, academic, and administrative perspectives.”

While the goal of bringing together the tech team, faculty members, administrators — and at times students — is an admirable one, increasingly, faculty members at a number of colleges say they are not being included in

decisions about the multimillion-dollar deals their institutions are striking with AI companies.

[Faculty members opposed](#) the decision of the California State University system — the largest four-year higher-education system in the country — to pay almost \$17 million to OpenAI in 2025 to give all students, faculty members, and staff members access to ChatGPT Edu.

At the University of Colorado system, faculty members and students signed [a letter](#) opposing a similar \$2-million contract with OpenAI.

There are numerous reasons faculty members are unhappy with the contracts including concerns about privacy, security, and cost. In some cases, the multimillion-dollar contracts were agreed to amid major budget cuts. Despite requests by CSU faculty members not to renew the contract with OpenAI, [officials did so in June](#).

Roxanne Shirazi, an associate professor at the Mina Rees Library of the City University of New York (CUNY) Graduate Center and a faculty senator for the CUNY system, says typically faculty members are asked to weigh in on decisions about tech tools and systems affecting teaching and learning.

But over the past several years, as technology has become more complex and the divide between academic and nonacademic technology more blurred, faculty members have become less included — especially at the early stages — in the decision making, she says.

Shirazi, chairperson for the past six years of CUNY's Faculty Senate standing committee on libraries and information technology, stresses that she is speaking for herself and not CUNY.

"Often those initial decisions happen, and we're playing catch up," she says. It's during the drawing up of the request for proposal "where you have the ability to say what you want the tool to do, what features you think you may need

to serve your needs. If the faculty aren't brought in and students aren't brought in at that stage, there's not a lot that we can do once the vendor bids. We can't really change what we're looking for mid-procurement."

"One of the biggest things that most institutions overlook is whether or not AI is something that aligns morally or ethically with their goals and visions."

Data governance, cybersecurity, tech teams, procurement — all these are key issues and all are affected by an institution's resources. Increasingly, experts warn that the overarching challenge higher education is facing "is becoming bifurcated along a line defined by AI investment and capabilities," as the Educause report on the digital AI divide puts it.

Efforts are being made to deal with the problem; one example is a pilot program established in 2024 by the National Science Foundation called [National Artificial Intelligence Research Resource](#) (NAIRR). As a partnership with federal agencies and the private sectors, including many tech companies, the program aims to democratize AI resources across higher education and drive AI innovation and scientific discovery.

NAIRR provides researchers and educators free access to AI resources — such as GPU clusters, high-performance computing systems, foundation models, and AI tools — that many individuals or their institutions can't afford. Private-sector

companies have provided \$100 million in in-kind contributions — such as advanced computing and cloud-computing resources, access to AI models, and technical support. In addition, the National Science Foundation has invested about \$60 million and intends to nearly double that in fiscal year 2026, says Katerina Antypas, senior adviser for cyberinfrastructure at the NSF. Over the past two years, NAIRR has distributed resources to nearly 800 research projects. To apply, researchers must write a short description of the work they want to do and estimate the amount of AI infrastructure needed. About 50 to 60 percent of those who apply are accepted, Antypas says.

About 90 percent of institutions awarded grants are in higher education and most of those are R1 institutions, but Antypas says NAIRR would like to bring in more colleges, including community colleges, with fewer resources.

NAIRR is one of a number of efforts to prevent the power of AI from being segregated at the pinnacle of the higher-education pyramid.

As Kellen, of Texas A&M, says, “The question most others in higher education are asking is ‘How do I get my students connected to working with AI at the level of the big boys? How do I get my computer scientists at my local community

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college or local university using the same class of tools that the engineering students at Texas A&M? How do we get them the same experiences for developing AI applications? How do we get access to even the commercial grade AI tools without breaking the bank?’ It’s all going to come down to affordability and access again, where the digital divide is widening, not narrowing.”

It's a common trope: "We're building the plane as we're flying it." But nowhere does that seem more true these days than for technology teams in higher education trying to manage the demands of AI.

There are so many variables and expectations. Pressure from leadership and trustees. Uneven data quality. Vendor hype. Fluctuating costs. Tech teams stretched too thin. Cybersecurity panics.

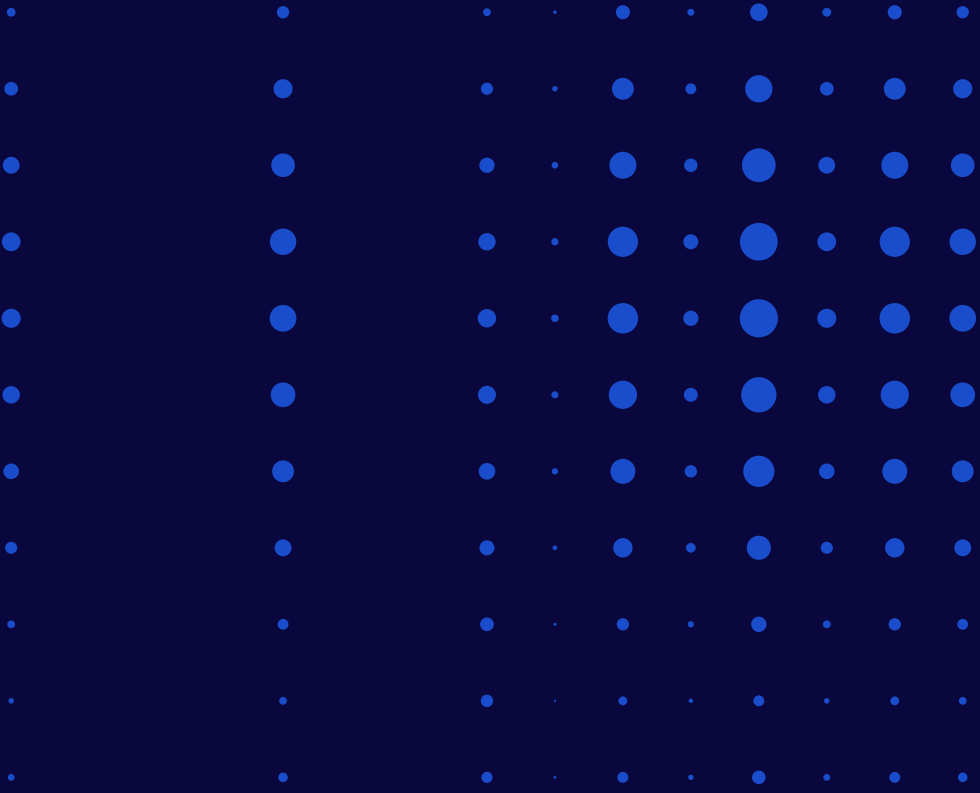
Technology leaders on campus are well aware of the challenges before them and, as is often the case, need to respond to a variety of demands, often without commensurate resources. That's not new — it's just that the rapid evolution of AI has put everything on fast forward.

But the field is far from level: Some elite research universities pour resources in developing bespoke AI tools and establishing data centers with megawatts of computing power, while those with less money and staff scramble to figure out how to ensure their colleges are AI competitive.

"There is so much external pressure on higher education," says Kalinowski of Clark University.

Technology leaders on campus are well aware of the challenges before them and, as is often the case, need to respond to a variety of demands, often without commensurate resources. That's not new — it's just that the rapid evolution of AI has put everything on fast forward.

"As a leadership team, we need to balance different levers. Our students are already using it, our board is anxious to see benefits from it, some faculty are excited, other faculty will never touch it. And how we navigate all of that is a challenge."



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