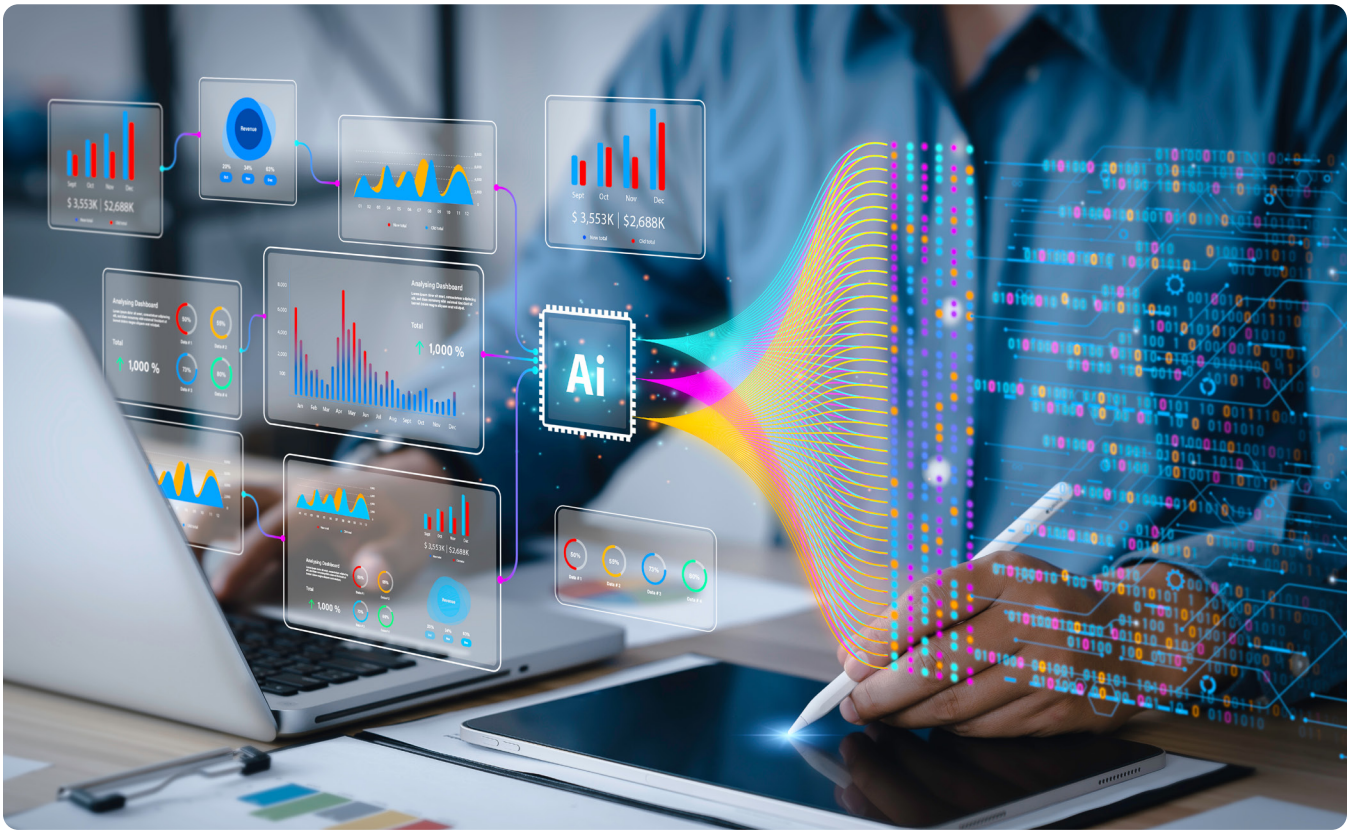
Will Higher Education **Harness the Opportunity of AI?**

AI's potential to advance teaching and learning is great, but higher education faces new pressure to build secure foundations without limiting the essential experimentation and research that will prepare students for AI's future.

As every facet of technology today — and students' lives — is being reshaped in some way by artificial intelligence, universities must not only pivot to prepare to meet students' rapidly growing demands in the AI space, but also leverage AI tools appropriately within their own roles to enhance institutional missions.



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Students, senior leadership, and administrators must now answer questions — quickly — around when, where, and how to best incorporate AI within the student journey, and how to prepare students for an AI workforce future, with all of the requisite skills, training, and know-how required to succeed and compete, while continuing to keep technology and critical assets safe from AI-driven cyber risks. Campuses and institutions that fall behind will fail to win new students or recruits — a non-starter when competition for enrollment is already tightening, smaller institutions face increased risk of closure, and the outlook for federal research funds grows more uncertain. All of these emerging and converging trends elevate AI as a make-or-break opportunity for higher education.

Where to Start?

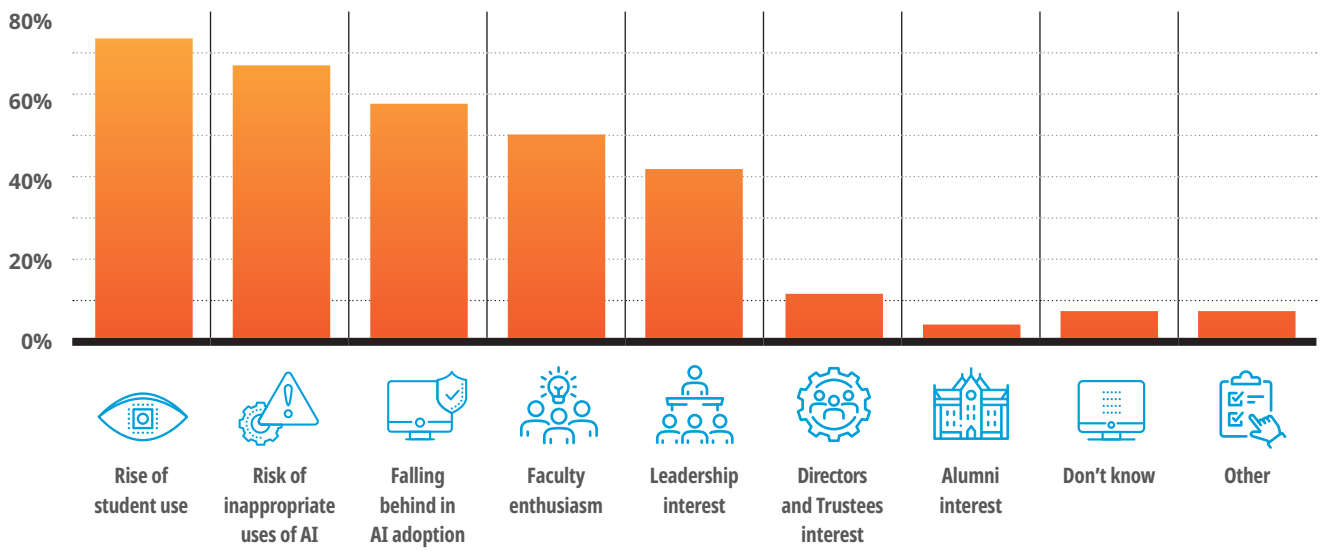
"It's such a transformative, technological shift, and it's going to impact pretty much every industry" said Dan Kent, field CTO at **Cloudflare**. "It might impact them differently, through automation tools in manufacturing and finance or natural language processing to enhance customer service and marketing, but AI will impact every industry and many of the employees who are going into those industries."

A **2024 EDUCAUSE study** focused on AI's impacts on higher education since the mainstreaming of gen AI tools found nearly half of respondents (49%) see AI as a strategic priority. The rise of students' use of AI tools in their coursework (73%) and concerns about falling behind in AI adoption (59%) are only two of the top motivators for institutions' AI strategic planning.

New Styles of IT and Academic Leadership Required

As educators and institutions gain trust in AI technologies, they also must determine how to handle short-term anxieties around the use of AI tools, **advised Gartner VP Analyst** Tony Sheehan. "In order to deliver on the promise of this technology within an academic institution there's a need for

Primary Motivators for AI-Related Strategic Planning



SOURCE: EDUCAUSE, "2024 EDUCAUSE AI Landscape Study," Feb. 2024

leadership, there's a need for ownership, there's a need for curiosity."

"The challenge of the skills of tomorrow, the need to try to align and respond to that with the evolution of the educational institution, that requires a lot of work," including new approaches to content, assessment, coaching, and new approaches to working, supporting, and guiding students, Sheehan shared during a **Gartner ThinkCast** podcast. "AI can definitely help, but institutional culture and change management are going to be vital enablers of success. Leadership is going to be key here, and there may well be a critical role for new styles of IT and new styles of academic leader to truly deliver this change."

Colleges and universities also need to gain greater understanding of the risks and limitations of AI, including its potential biases, and answer still more philosophical and ethical questions around its role versus humans, or in partnership with humans, Kent said.

"As we learn more about how we train these models, and the non-deterministic nature of them, we need to work on how to address those risks and biases. That's going to happen over the coming months and years," he said. "This field needs roles beyond programmers and engineers. There should also be roles and therefore students thinking about the role of AI, the role of the human, how they interact optimally and safely. There will be roles that focus on guardrails, the risks, and ethics behind leveraging AI across various industries.

"Having said that, there are very tactical concerns around using the technology today and the possibility of universities losing their intellectual property if it's not controlled properly."

Prepare Your Environment

Ensuring appropriate data protections are in place, and proper data governance is established, should be the first steps institutions undertake before embarking on more widespread AI deployments. Where shadow AI is likely already

deployed on campus networks or edge environments, it's even more important for campuses to ensure data protections as well as privacy and regulatory compliance is in place. Zero-trust frameworks (and corresponding IAM and MFA tools), as well as application security and data-loss protection each play a critical role in protecting campus environments in the era of AI. Not only are these solutions critical for protecting data privacy and confidentiality, they also help campuses ensure that data that feeds into campus-owned or -developed AI tools accesses the correct data for its use case.

"How do you stop hallucinations? How do you stop malicious attacks that put bad information into a learning model." Kent said. "Two years from now, we'll probably have a different conversation around AI, but for where we are today in its maturation, I think we have to worry about things such as biases, misinformation, and IP and data loss."

Help Students Prepare

Alongside the critical importance of preparing data and infrastructure for new AI use cases, it's just as critical for institutions to embark on an informed journey to prepare students for future careers and work with AI. Allowing students the flexibility and freedom to work with and build their own LLMs or machine learning tools in cordoned off, sandboxed environments offers a more secure means of experimentation, without introducing potential harms to broader institutional systems, IP, or datasets.

"You have to get students to understand AI and hopefully embrace it and leverage it," Kent said. "How students use AI will be quite different depending on the field that they're in, but I think we have to move faster than we've ever moved before in terms of any workforce in its need to be aware, trained, and possibly building new AI tools so that students are better prepared when they graduate." ■