

AI in Higher Education

Mentions of AI in higher education are seemingly ubiquitous. Even before the ChatGPT- fueled frenzy of 2023, many higher education institutions foresaw an ongoing and extensive impact of the new technologies. A 2020 survey of 509 colleges and universities found that 99.4% of respondents foresaw multiple use cases within their institution, and reported it as “instrumental to institutional competitiveness within the next three years.”¹

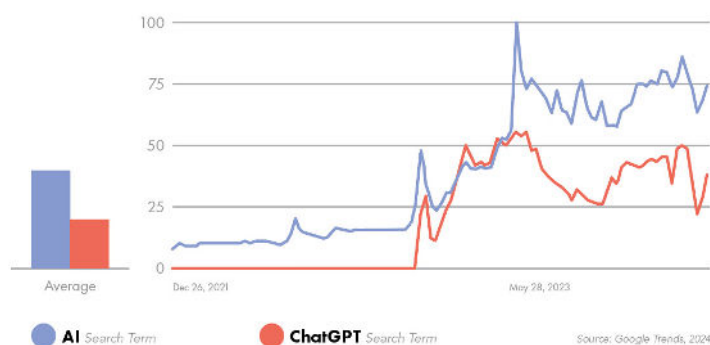
Three years later, to what degree has AI impacted higher education? According to the research, we are still in nascent stages of AI adoption across the industry. Newer surveys corroborate the IDC findings; higher education administrators still see vast potential for AI adoptions across various functions of work. However, AI usage is “siloes and rudimentary across higher education,” finds a 2023 report by Ellucian.² Less than one-third of respondents reported using AI for work, with a significant percentage of these using various AI tools for relatively primitive use-cases, such as basic information retrieval.

Looking forward, the potential implementations of AI remain broad and transformational, with impacts including forecasting enrollment trends, optimizing retention rates, and providing 24/7 support for prospective student inquiries via a chatbot. Individual higher education institutions have ideated and begun to implement creative uses for AI technologies. In mid-2023, it was reported that Harvard will utilize ChatGPT to assist students in an introductory computer science course, primarily for finding bugs in code and answering student questions.³

Societal Impact: Search Trends and Job Postings

Beyond impact on discourse/processes within universities and colleges, AI has become a common topic in far-reaching conversations. Google Trends data evidence this; as shown in the chart to the right, searches for “AI” (shown by the blue line) were relatively flat through 2022, and then spiked in early-mid 2023. The search trends mirror the launch and widespread public awareness of ChatGPT (searches for which are shown with the red line).

AI-Term Search Frequency Over Time



1 Jyoti & Sutherland, 2020, “Future Ready Institutions”, IDC & Microsoft

2 Ellucian, 2023, “Higher Education Leaders Eager to Embrace AI and Transform Campus Operations”

3 Hamid & Schisgall, 2023, “CS50 Will Integrate Artificial Intelligence into Course Instruction”, The Harvard Crimson

The prevalence of AI in public discourse has influenced the labor market. The number of job postings that mention “Artificial Intelligence” also increased across a similar timeframe, as shown in the chart below.

Trends in Job Postings with “Artificial Intelligence”



The graduate academic field has mobilized to meet this demand through a variety of focused degree offerings. The most relevant classification code, by which the NCES tracks degrees and degree completions, is “Artificial Intelligence.” Analysis of the degrees listed under this code portray a growth field, with completions increasing by 279% from 2016-2022. Completions reported under the “Artificial Intelligence” Classification of Instructional Program code increased by 279% from 2016-2022.⁴ Additionally, many new degrees have come to market in the past few years, as shown below:

University	Program	Cost
UT Austin	MS Artificial Intelligence	\$10,000
Duke University	MEng. Artificial Intelligence for Product Innovation	\$96,020
Penn State World Campus	MPS in Artificial Intelligence	\$34,848
Johns Hopkins University	MS Artificial Intelligence	\$37,740
Drexel University	MS Artificial Intelligence and Machine Learning	\$62,820

All told, AI has become a seemingly universal topic, with incredible potential impacts across a variety of fields. We have seen some of these changes realized, and it is likely that the bulk of possible use-cases lay ahead. The explosion of AI in everyday discourse has resulted in some lasting changes in the labor and academic markets, and this is a space that universities and colleges should continuously monitor to adapt their curricula and teaching methodologies to ensure graduates are well-prepared for the evolving demands of the workforce.

⁴ Lightcast, 2024, “Program Overview”

Sources

- Ellucian. 2023. “Higher Education Leaders Eager to Embrace AI and Transform Campus Operations”. <https://www.ellucian.com/assets/en/article/higher-education-leaders-eager-embrace-ai-transform-campus-operations.pdf>
- Google Trends. 2024. <https://www.google.com/trends>
- Hamid & Schisgall. 2023. “CS50 Will Integrate Artificial Intelligence into Course Instruction”. The Harvard Crimson. <https://www.thecrimson.com/article/2023/6/21/cs50-artificial-intelligence/>
- Jyoti & Sutherland. 2020. “Future Ready Institutions”. IDC & Microsoft. https://edudownloads.azureedge.net/msdownloads/FutureReadyBusiness_HigherEducation_AI_US_Design_final_2.pdf
- Lightcast. 2024. “Program Overview”. www.lightcast.io
- Lightcast. 2024. “Job Postings Analysis”. www.lightcast.io