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The Need for Artificial Intelligence Programs in AACSB Accredited Business Schools: A Comparison Across Universities

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Abstract

Artificial intelligence (AI) is changing the way business is conducted, and business schools must offer AI curriculum to prepare students for industry expectations. This research assesses AACSB accredited business schools to determine the magnitude of AI offerings and themes. The analysis shows that more AI programs are offered in computing and engineering schools than in business schools. However, while there is some overlap in the themes of the school programs, there is a distinct focal point for each with computing and engineering taking a technical focus and business compelling a value and decision-making focus. Since a technical focus and a business focus are both needed and computing and engineering is already offering the technical focus, business schools need to increase programs in AI to provide the business focus that is lacking.

Keywords: generative AI, AI themes, business education, AI skills

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The Need for Artificial Intelligence Programs in AACSB Accredited Business Schools: A Comparison Across Universities

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1. INTRODUCTION

Traditional Artificial Intelligence (AI) courses and programs (e.g., machine learning, robotics, etc.) have been offered for quite some time in engineering and computer science programs. However, in the last few years, specifically generative AI has become an essential part of people's lives (Gartner, 2025). It is impacting how we work every day, everywhere. Generative AI can write, design images, generate code, and create audio. It is being used in offices around the world, transforming how businesses operate. It is quickly becoming an essential technology. As a result, employers are looking to hire people who not only know how to use these tools, but who can think strategically about how to apply them. This represents a major shift in the skills that matter most in today's job market.

While engineering and computer science programs have been teaching AI (including offering some generative AI courses) as part of their curriculum, business schools have fallen behind (AACSB, 2025). Teaching AI has historically required teaching difficult mathematics, finding materials that make sense to non-tech students, and keeping up with a field that is constantly changing. Some business schools are offering a few AI-related electives at the graduate level. However, business schools need to realize that AI, specifically generative AI, isn't just a technical tool. It's changing how we do business, from marketing products to analyzing finances, managing supply chains, and more.

Nearly one in three American workers is already using generative AI on the job (Microsoft, 2025). Business students need to be prepared to utilize this technology. This paper examines where business schools stand compared to other schools and substantiates the need for the development of generative AI programs across the business curriculum to meet industry needs.

2. LITERATURE REVIEW

AI

Generative AI refers to artificial intelligence systems capable of creating new content across various modalities including text, images, audio, video, code, and 3D models. These systems learn patterns from existing data and use this knowledge to generate novel outputs that weren't explicitly programmed (Bommasani, et al., 2022).

Generative AI models are primarily built on neural network architectures, with transformer-based models currently dominating the field. These systems function by learning statistical patterns from massive datasets during training. Then these learned patterns are used to predict and generate new content that exhibits similar characteristics. This provides the ability to produce outputs that can adapt to specific prompts or instructions (LeCun, et al., 2023)

The foundation of modern generative AI is large language models (LLMs) and neural network models, which provide generative AI model capabilities in content generation across different domains (Brown, et al., 2020; Ramesh, et al., 2022).

AI in Academia

The integration of AI in education presents significant challenges, particularly "when introducing this complex and very important area of technology to audiences beyond the students of computing and engineering disciplines" (Xu & Babaian, 2021, p. 1). While AI is commonly expected within computer science and engineering curricula, business programs have been slow to adopt it (Southworth, et al., 2023). Even introductory AI courses in technical programs are recognized as challenging to teach (Harris & Kiefer, 2004), largely due to AI's broad scope and rapidly evolving nature.

Business schools face an additional disadvantage, lacking the pedagogical resources available to engineering programs (Xu & Babaian, 2021). Most AI textbooks rely heavily on complex mathematical or computer algorithms and provide few real-world examples or case studies. An analysis of AI courses across the top 46 business schools (based on 2020 U.S. News rankings) revealed that machine learning forms the core of business school AI curriculum, which typically combines AI and data analytics topics (Chen, 2022). Chen also found that AI is primarily introduced in graduate-level information systems courses. However, since AI impacts every aspect

of business, it should be integrated across all disciplines, not just technical ones, and given its complexity, multiple courses should be offered within each discipline (Sollosy & McInerney, 2022; Southworth, et al., 2023).

A survey of U.S. higher education leaders indicates that while students are perceived to use AI tools extensively, faculty adoption lags. More than a third of these leaders believe their institutions are below average (28%) or behind (7%) compared to other universities in generative AI tool implementation (Watson & Rainie, 2025). Although generative AI is rapidly transforming education, its complexity creates significant challenges for educators. "AI education has yet to catch up with the challenge of introducing this complex and very important area of technology to audiences beyond the students of computing and engineering disciplines" (Xu & Babaian, 2021). However, AI provides value and is necessary in university education. "AI training equips you with the knowledge and skills to harness the technology's power, allowing you to innovate and solve complex problems traditional methods can't address" (Gibson, 2024). AI also adds value specifically in business schools. Students can enhance decision making and increase efficiency and innovation (Farrugia, 2023; Gibson, 2024).

AI in Industry

The impact of generative AI on the workforce is expected to be striking, transforming both routine and non-routine tasks (Poba-Nzaou, et al., 2021). Between 2010-2019, AI-related job postings showed significant growth in both absolute numbers and as a percentage of total job listings (Alekseeva, et al., 2021).

A recent survey of 4,278 U.S. workers revealed that 30.1% currently use generative AI in their workplace. Users of these AI tools tend to be younger, more educated, and earn higher incomes. Industry adoption varies considerably, with information services and management companies reporting 60% AI utilization, while real estate, construction, and education sectors hover around 40% (Hartley, et al., 2024).

Currently, approximately 12% of U.S. workers are in occupations where tasks are expected to be automated by generative AI (Fuller, et al., 2025). This automation is already reducing or eliminating many entry-level positions, particularly in software engineering (Fuller, et al., 2025). However, in other fields, generative AI may create new opportunities as the landscape of employable skills evolves (Poba-Nzaou, et al., 2021).

An analysis of UK job postings from 2018 to 2024 found that employers increasingly value candidates' AI skills over their educational degrees (Gonzalez, et al., 2024). This trend strongly suggests that there is an increasing need for universities to adequately equip graduates with the AI competencies demanded by today's job market.

Skills Needed in Industry

Employers are increasingly seeking hybrid talent with a skill set that combines technical capabilities such as data manipulation and training data development alongside strategic competencies including advanced problem-solving and strategic decision-making.

According to research by Jeppson (2025), the AI revolution is driving substantial demand for professionals with expertise in data analytics, STEM disciplines, and information technology.

Organizations integrating AI are rapidly transitioning toward more educated and specialized workforces, with a particular emphasis on technical domains. Hazan, et al. (2024) further highlights this trend, noting a significant increase in job postings requiring specialized skills like robotics engineering, advanced data analysis, and complex system integration.

The AI professional landscape requires a sophisticated and multifaceted skill set that exceeds the traditional technological boundaries. Technical competencies form the foundational framework for success in this rapidly evolving field, with programming languages like Python and R serving as critical tools for innovation.

Data engineering knowledge has become increasingly important, reflecting the growing complexity of AI systems. Professionals must demonstrate advanced capabilities in data manipulation, analysis, and interpretation. This requires not only technical proficiency but also the ability to extract meaningful insights from intricate datasets using advanced visualization tools like Power BI and Tableau.

Cloud computing platforms including Azure and AWS have emerged as crucial infrastructure for AI development, necessitating strong familiarity and strategic implementation skills. These platforms enable scalable, flexible technological

solutions that are fundamental to modern AI research and application.

Beyond technical skills, employers are placing increased emphasis on complementary professional attributes. The World Economic Forum's (2025) The Future of Jobs Report 2025 highlights the critical importance of soft skills such as strategic problem-solving, advanced critical thinking, professional communication, and effective collaboration. These capabilities enable AI professionals to translate complex technological concepts into actionable business strategies.

Educational pathways for AI professionals have become increasingly specialized. Typical credentials include bachelor's degrees in computer science, master's degrees in AI-related disciplines, and doctoral research focusing on advanced technological applications. Emerging specialized roles like Generative AI Engineer, Computer Vision Engineer, and Remote AI Training Specialist underscore the field's growing complexity and segmentation.

Researchers like Shen (2024) emphasize that success in the AI arena requires continuous learning and adaptive professional development. Professionals must consistently update their knowledge frameworks, cultivate innovative thinking, and maintain a dynamic approach to technological engagement. This involves not only mastering existing technologies but also developing the capacity to anticipate and integrate emerging computational paradigms.

The rapidly transforming labor market demands that AI professionals remain agile, proactively updating their skills to match evolving technological demands. This requires a holistic approach that balances deep technical expertise with broader strategic understanding, positioning professionals to navigate the complex and dynamic landscape of artificial intelligence.

3. METHODOLOGY

At the time of data collection, January to May 2024, there were 550 AACSB accredited US business schools. Data was collected from each of the universities that housed these schools to determine 1) if they had some type of AI program at the university, 2) which school/college was it located, and 3) how the business school compared to the other schools/colleges. AI programs/certificates were identified by use of Artificial Intelligence in the name of the program. Ninety-nine (18%) universities had some type of AI program, either major, minor, certificate or concentration. Of these, there were fifty-five at the undergraduate level (56%).

Due to the differences in how universities name their schools, a classification needed to be created for the data collected to be mapped. Appendix A shows the classification of school and the list of specific school names that fell into each one (this only included the school area and not any specific "named" schools). This study utilized a similar process used in a prior study which surveyed university IS program curriculum described on the websites of the universities (Yang & Wen, 2017). Multiple authors went through the school areas and coded them based on the classification item that best described the school area. Where there were differences, these were discussed, and a decision was made. The school classifications were Arts & Sciences (A&S), Business, Computing & Engineering (C&E), Health, and Science & Technology (S&T).

Each of the AI programs identified the number of required courses needed to complete the program. Course names and descriptions were obtained for the required courses. The elective courses were not included because these courses would not be taken by every student in a program. These courses were coded by the school classification. Microsoft Co-Pilot identified common themes among all courses, as well as within schools and by program type. These themes were then reviewed by the authors in a similar process as the school classification. The themes were iteratively modified by the authors. The full list of themes can be found in Appendix B.

4. RESULTS

The size of the schools based on undergraduate enrollment and the program types that are offered are given in Table 1. Universities were classified as small if they had less than 10,000 undergraduate students. They were classified as medium sized if they had between 10,000 and less than or equal to 19,999. Universities with 20,000 or more undergraduate students were classified as large. Small size universities had the highest percentage of AI majors (45%), minors (72%), and concentrations in AI (54%). Large size universities had the greatest number of certificate programs (64%). A chi-square test of independence showed a significant association between university size and AI program type ($\chi^2(6) = 16.91$, $p < 0.01$).

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Size	Major	Minor	Cert.	Conc.	Total
Large	36%	11%	64%	8%	28%
Medium	18%	17%	27%	38%	23%
Small	45%	72%	9%	54%	48%
Total	34%	28%	17%	20%	100%

Table 1. University Size and AI Program Offerings (Cert. = Certificate, Conc. = Concentration)

Sixty-six percent of the universities were public. Table 2 shows the breakdown of university type and AI program types. Public universities had the highest percentage of AI major programs (59%), while private universities had the highest percentage of AI minor programs (56%). AI certifications were only offered by public universities and they offered the greatest number of concentrations in AI (77%). A chi-square test of independence showed a significant association between university type and AI program type ($\chi^2(3) = 8.52$, $p < 0.05$).

Type	Major	Minor	Cert.	Conc.	Total
Private	11%	14%	0%	5%	30%
Public	23%	14%	17%	15%	70%
Total	34%	28%	17%	20%	100%

Table 2. University Type and AI Program Offerings (Cert. = Certificate, Conc. = Concentration)

Figure 1 shows that most of the program types offered are majors (34%). This is followed by minors (28%). Finally, concentrations and certificate programs, with 20% and 17% respectively, follow the minor programs.

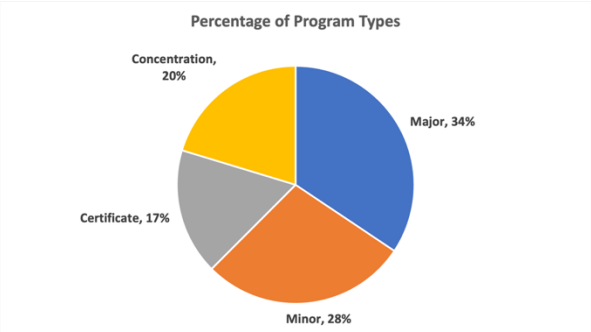

Figure 1. Percentage of Program Types

Figure 2 indicates the percentage of programs (regardless of type) that each school classification holds. C&E schools make up 47% of where the AI programs are housed. Following them is A&S schools with 24%. S&T schools make up 15% of the programs. Business schools make up just 13% followed only by Health schools with 2%.

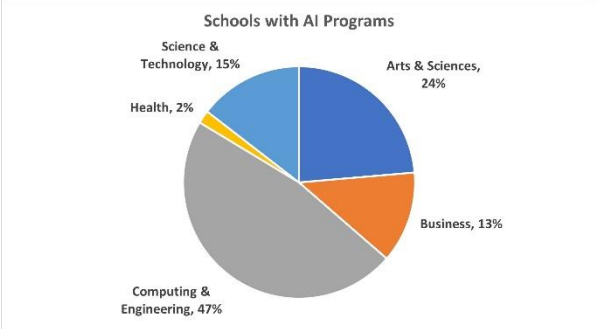

Figure 2. Schools with AI Programs

Table 3 provides information on the different AI program types within the schools. C&E schools not only offer the greatest number of AI programs overall, but they also have the highest percentage of each type of AI program. They have 45% of the major programs, 56% of the minor programs, 45% of the certificate programs, and 46% of the AI concentrations. A&S has the second highest percentage of the major programs (27%), certificate programs (27%), and concentrations (31%). Business has the second highest percentage of the minor programs (28%). Health schools only have certificate programs. However, a chi-square test of independence did not detect a statistically significant association between schools and AI program type ($\chi^2(12) = 20.02$, $p = .067$).

School	Major	Minor	Cert.	Conc.	Total
Arts & Sciences	27%	6%	27%	31%	22%
Business	14%	28%	9%	0%	14%
Computing & Engin.	45%	56%	45%	46%	48%
Health	0%	0%	18%	0%	3%
Science & Technology	14%	11%	0%	23%	13%
Total	100%	100%	100 %	100%	100%

Table 3. Program Types within Schools (Cert. = Certificate, Conc. = Concentration)

Figure 3 provides unique and overlapping program themes from the Business school and the C&E school classifications. The C&E school themes were selected to compare with the Business school themes because the C&E classification makes up the highest percentage of AI programs. The themes that overlapped between the two areas were Algorithms & Data Structures, Cloud Computing, Deep Learning, Ethics, Foundations of AI, Machine Learning, and

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Programming. Algorithms & Data Structures, Ethics, Foundations of AI, Machine Learning, and Programming are all fundamental themes in AI which would be expected to be seen in most programs. Deep Learning makes sense for both areas as this is important with processing large amounts of data as well as creating complex models. When working with AI solutions, leveraging Cloud Computing can be important for its scalability and efficiency.

Regarding the unique themes found within each classification, there appears to be clear differences in the AI application and focus. The Business themes are more focused on using AI to drive business value and competitive advantage, make data-driven decisions, and enhance business processes with specific applications. These are more application-oriented seeking to solve business problems. The C&E themes are more focused on the technical side of AI emphasizing the development and optimization of AI technologies such as computer vision and robotics.

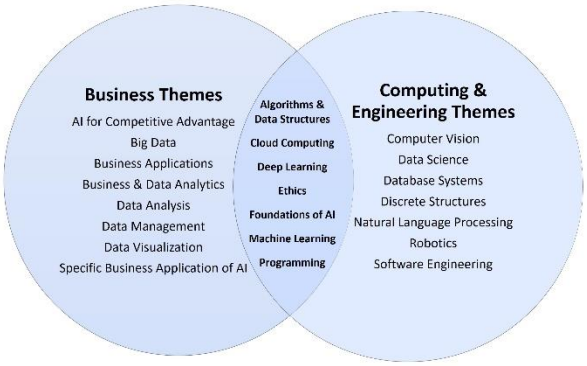

Figure 3. Business Themes vs. C&E Themes

5. LIMITATIONS & CONCLUSION

Understanding what programs are offering AI (majors, minors, certificates, and concentrations) and what concepts/themes are being covered is vital to the future of generative AI in education. Five hundred and fifty US universities that have AACSB accredited business schools were assessed. Of those universities, 99 had some type of AI program, with 55 of those being at the undergraduate level. Thirty-four percent of the program types were majors in AI, with computing and engineering housing 47% of all AI programs. Business schools only offered 13%. Additionally, computing and engineering had the highest percentage of each type of program (major, minor, certificate, and concentration). Business only had the second highest in minors. It is clear from this analysis that business programs in AI are lagging.

AI programs offered in C&E schools focus on technical aspects, such as AI development and optimization. When AI programs are offered in business schools, they focus on using AI to propel business value, improve decision making, and boost business processes. There is some overlap in concepts, but still a distinct approach to each area. Given the differences in the themes, business school education in AI cannot rely on computing and engineering course offerings. More development of AI programs must occur across business schools to meet the industry needs.

This research is limited by its focus on US universities with AACSB accredited business schools. Only universities that met that requirement were included in this assessment. In addition, only identifying programs which specifically have artificial intelligence in the program name may create a biased representation of current AI education in universities. Another limitation is data was collected at a point in time. It is possible universities that were assessed have made changes to their curriculum since the data collection.

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APPENDIX A: SCHOOL CLASSIFICATIONS

Arts & Sciences

College of Arts and Sciences
College of Liberal Arts
College of Liberal Arts and Sciences
School of Arts and Sciences

Business

School of Business

Computing & Engineering

College of Computing
College of Computing and Informatics
College of Engineering

College of Engineering and Computer Science
College of Engineering and Polymer Science
College of Engineering, Technology, and Physical Sciences
College of Science, Technology, Engineering & Mathematics
Herbert Wertheim College of Engineering
School of Computer Science
School of Computing
School of Engineering
School of Engineering and Applied Science
School of Engineering and Computer Science
School of Engineering, Computer Science and Artificial Intelligence
School of Informatics, Computing, and Engineering
Tickle College of Engineering

Health

College of Health and Human Performance
College of Public Health and Health Professions

Science & Technology

College of Information Science & Technology
College of Innovation and Technology
College of Natural Science
College of Science
College of Science and Technology
College of Sciences
College of Sciences and Technology
School of Science and Mathematics

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APPENDIX B: THEMES

Final List of Themes

Algorithms and Data Structures	Database Systems
AI for Competitive Advantage	Deep Learning
Big Data	Discrete Structures
Business and Data Analytics	Ethics
Business Applications	Foundations of AI
Cloud Computing	Machine Learning
Computer Vision	Natural Language Processing
Data Analysis	Programming
Data Management	Robotics
Data Science	Software Engineering
Data Visualization	Specific Business Application of AI

Business and C&E Themes

Business Themes	**C&E Themes**
AI for Competitive Advantage	Algorithms and Data Structures
Algorithms and Data Structures	Cloud Computing
Big Data	Computer Vision
Business and Data Analytics	Data Science
Business Applications	Database Systems
Cloud Computing	Deep Learning
Data Analysis	Discrete Structures
Data Management	Ethics
Data Visualization	Foundations of AI
Deep Learning	Machine Learning
Ethics	Natural Language Processing
Foundations of AI	Programming
Machine Learning	Robotics
Programming	Software Engineering
Specific Business Application of AI	