

## Future-Proofing AI Talent in The United States: The Role of Academia in Meeting Industry Demands

Sunish Vengathattil <sup>1\*</sup>

<sup>1\*</sup> Sr. Director, Software Engineering, Clarivate Analytics, United States

Email: [sunish\\_v\\_nsir@ieee.org](mailto:sunish_v_nsir@ieee.org) <sup>1\*</sup>

Article history:

Received February 20, 2025

Revised February 26, 2025

Accepted March 3, 2025

### Abstract

The rapid growth of technology has created a strong demand for skilled professionals, requiring universities to adapt their programs to meet industry needs. This paper examines the role of higher education, especially in the United States, in preparing students for the future workforce by addressing key challenges such as keeping curricula up to date, securing research funding, and providing hands-on training. To tackle these issues, universities are introducing specialized programs, encouraging interdisciplinary learning, and building stronger partnerships with industries to close the skills gap. Additionally, new educational tools are being used to personalize learning and better equip students for technology-driven careers. This paper emphasizes that continuous innovation in higher education is essential to developing a well-prepared, industry-ready workforce, helping the U.S. maintain its leadership in the global economy.

### Keywords:

AI Talent Development; Future-Proofing Workforce; Academia-Industry Collaboration; AI Education Strategies; Skill Gap in AI; Artificial Intelligence Curriculum.

## 1. INTRODUCTION

The rapid growth of technology in the United States has created an urgent need for skilled professionals, yet traditional education systems struggle to keep up with industry demands. The shortage of trained experts is largely due to a significant gap between what students learn in school and the skills required in the workforce. To bridge this gap, universities must take the lead in developing effective training programs that equip students with both foundational knowledge and practical experience.

As technology continues to evolve, education systems must adapt to ensure future professionals are prepared for industry shifts. Universities are now updating their curricula to incorporate emerging technologies and foster interdisciplinary learning. Stronger collaboration between higher education and businesses is essential, providing students with hands-on experience and real-world problem-solving skills.

To further enhance learning, educators can leverage advanced educational tools to personalize instruction and better prepare students for the workforce. By adopting innovative teaching methods, universities can ensure graduates are ready to meet the changing demands of the job market. This paper explores how higher education institutions in the United States can refine their programs to combine theoretical knowledge with the practical skills necessary for career success.

### 1.1. Literature Review

New artificial intelligence technology creates workforce demand which calls for academics to adapt their training methods to produce qualified graduates. This review looks at AI education today and how colleges and universities face problems entering the AI job market.

#### 1.1.1. Challenges in AI Education

Educational institutions currently experience their main obstacle in obtaining insufficient funding to carry out advanced research projects in AI. The lack of PhD student funding would damage research and innovation efforts because advanced students actively participate in developing AI talent according to

Stanford University (2021). Businesses have obtained virtually all financial support and expert personnel needed to perform AI work since the year 2000. The insufficient collaboration between business and educational institutions when conducting AI research and development has raised numerous significant worries. Industry organizations controlling AI research activities determine its developmental direction while constraining public access to research investigations (Ahmed & Thompson, 2023).

### **1.1.2. Curriculum Development and Industry Alignment**

Educational institutions now include artificial intelligence material in their current curriculum reforms. Emory University together with the University of Florida currently provides AI minor and certificate programs that build fundamental AI skills for their students (OECD, 2023). Modern AI workforce requirements drive educational institutions to work together with businesses for creating specialized programs (McKinsey & Company, 2022).

Artificial Intelligence functions as a learning tool for educators to improve student educational results. School operational integration with Artificial Intelligence allows teachers to focus more on individual student teaching and student-to-teacher engagement. Institutions make these adjustments to enhance learning results because they develop AI-related abilities that students need in their future careers (Siau & Wang, 2020).

### **1.1.3. Industry Collaboration and Skill Development**

Academia together with industry supports an organized structure that develops new AI talents. Research indicates that industry partnerships help organizations enhance their AI tools which they use to train staff while promoting their professional advancements (Xu & Ouyang, 2022). An increasing number of businesses now seek particular AI-skilled candidates when hiring since they value relevant competencies above traditional educational degrees. The educational program at universities requires transformation to teach practical AI skills that match industrial job requirements according to the World Economic Forum (2023).

## **1.2. Rising Demand for AI Professionals**

Engagements between organizations and industries continue to drive the demand for professionals trained in artificial intelligence systems. Companies worldwide are leveraging AI technologies to optimize operations and gain competitive advantages, increasing the need for skilled AI talent (McKinsey & Company, 2022).

AI-related skills accounted for a significant portion of job postings over the past decade. Research indicates that AI-related competencies represented nearly 45% of all job advertisements between 2016 and 2024, while traditional machine learning positions declined to 30% (World Economic Forum, 2023). Employers now prioritize expertise in deep learning, natural language processing, and AI ethics. According to LinkedIn's Jobs on the Rise report, AI and data-centric roles are expected to dominate the workforce, emphasizing the need for educational programs to align with industry demands (OECD, 2023).

A study by the World Economic Forum (2023) found that AI-related job postings increased by 21% between 2018 and 2024, intensifying competition for AI professionals in key industries such as healthcare, finance, and cybersecurity. This surge underscores the necessity for educational institutions to adopt innovative teaching methodologies that prepare students for practical AI applications.

To meet these growing demands, academia, and industry must collaborate in designing curricula that integrate both AI theory and hands-on application. Well-structured initiatives are essential to prevent skill gaps from hindering AI-driven advancements in critical sectors (Stanford University, 2021).

### **1.2.1. The Role of Academia in Addressing AI Workforce Needs**

The quick development of artificial intelligence (AI) technology requires an enlarged number of experienced AI professionals in the workforce. Academic institutions create fundamental initiatives to address the discrepancy between AI education offerings and business requirements in the workforce.

### **1.2.2. Curriculum Development and AI Training**

The educational institutions are launching AI-specific certification programs and dedicated courses to help their students gain such expertise. AI minors along with certificate programs now exist at Emory University and the University of Florida according to McKinsey & Company (2022).

### **1.2.3. Integration of AI Across Disciplines**

Research institutions have started implementing AI throughout different knowledge domains because of its wide application range. Under requirements set by the University of Adelaide all students must take AI and data science classes to acquire modern workplace technological skills (OECD, 2023).

### **1.2.4. Industry Collaboration and Practical Training**

Educational institutions establish collaborations with businesses to connect AI educational content with operational business needs. The partnerships connect students to organizational settings which let them study modern business issues while learning practical skills (World Economic Forum, 2023).

### **1.2.5. AI Research and Knowledge Transfer**

AI research along with talent development form the two essential activities universities perform. Research activities at these institutions promote scientific discovery-to-practical AI implementation knowledge sharing that enables students to tackle current AI application challenges (Stanford University, 2021).

### **1.2.6. AI Ethics and Responsible Development**

Academic training requires ethical analysis as one of its core elements during the development of AI systems. Academic institutions implement mandates which focus on AI data protection alongside prejudice elimination techniques as well as AI-generated effects on society thus educating students about their moral duties in AI systems management (Siau & Wang, 2020).

Academics develop essential strategies that prepare upcoming AI workers through graduation so they can advance important technological developments in this fast-changing field.

### **1.2.7. The Importance of Aligning AI Education with Industry Demands**

Professionals who understand how to deploy and manage AI-based systems must enter the workforce because artificial intelligence (AI) keeps advancing rapidly. Many college graduates do not possess the important abilities which companies need to fill their AI-related positions. AI education needs to integrate with industry requirements to allow students genuine practice of advancing technologies.

The bond between education focused on artificial intelligence and business requirements strengthens because companies in finance and healthcare as well as manufacturing and cybersecurity sectors implement AI systems daily. The Organisation for Economic Co-operation and Development reports through their 2023 paper that AI-enhanced education reform enhances large-scale learning while enabling cost optimization and introduces new training methods to improve student outcomes (OECD, 2023). Higher education institutions need fundamental changes to their AI academic programs because they must teach students operational methods that follow industrial standards and applications of contemporary AI systems.

AI education relies heavily on industrial involvement. Academic institutions working alongside businesses create educational opportunities which enable students to understand modern sector practices and ethical AI applications as well as provide practical AI tool experience. Universities collaborating with businesses make their students industry-ready through adapted AI courses that address business requirements according to World Economic Forum (2023). Eccentric business-university partnerships let companies find qualified AI experts who both boost operations and develop innovative business solutions.

The curriculum should teach ethical principles about AI development alongside responsible patterns for AI utilization. "The adoption of artificial intelligence by the general public creates trouble about how personal information is used and about bias that might lie beneath machines that learn when coupled with unclear factors determining decisions". Siau & Wang (2020) explain how teaching AI ethics at the university level helps students create impartial and responsible AI systems that reduce potential security threats. Creative teaching methods must be employed at educational institutions to teach students ethical principles for developing AI systems responsibly.

Modern AI preparation of future professionals requires Universities to build partnerships between academia and industries to modify their curricula with practical AI knowledge while promoting ethical AI education standards. The worldwide deficiency in AI experts will keep growing unless institutions unite their forces through these specific measures for training future AI specialists.

## **1.3. The Role of Academia in AI Workforce Development**

AI development at a fast pace requires trained specialists from different industrial sectors to fill the growing demand. Higher learning institutions prepare AI workers through specialized instruction and they support creative practice along with teaching responsible AI implementation. Starting in a new economy driven by artificial intelligence requires universities to create permanent changes in their teaching methods and course content.

### **1.3.1. Modern Education on Artificial Intelligence Must Reflect Current Industrial Standards.**

Universities need to include machine learning together with natural language processing and AI ethical knowledge into their educational curriculum align it to industry demands. The combination of theoretical AI content from traditional computer science courses creates an academic-industry gap because such programs do not focus on practical applications according to Russell & Norvig (2021). Educational programs that adopt modern AI tools and cutting-edge techniques create bridges between educational gaps since they offer students practical abilities relevant to AI-based careers.

### **1.3.2. Incorporating Practical Training and Industry Exposure**

AI teaching requires students to gain essential practical training. Educational institutions which work alongside major companies continue to establish partnerships for transient employment experiences and combined academic-professional programs and artificial intelligence-focused final-year assignments. The

research performed by Brynjolfsson & McAfee (2022) shows that students acquire better technical abilities and secure more employments when they work on AI laboratory projects alongside industry partnerships. Real-world industry involvement in student learning enables them to build solutions by processing actual datasets while addressing real-world industrial challenges.

**1.3.3. Ethical AI Education and Responsible AI Development**

The steady growth of AI implementation in various fields causes increasing worries about discrimination and moral principles in AI deployment. Universities need to establish AI ethics curriculum integration for proper teaching of ethical AI development methods to students. AI professionals must respect ethical requirements which consist of fairness alongside transparency and accountability according to Siau & Wang (2020). Educational programs based on AI ethics in research alongside curriculum activities help universities develop future AI professionals who construct equitable fair AI systems.

**1.3.4. Research and Innovation in AI**

The advancement of Artificial Intelligence relies heavily on research activities performed in university settings. Research facilities at institutions that maintain advanced technology platforms enable the development of new AI technologies which include discoveries in deep learning science as well as healthcare AI and automation systems. The research conducted by LeCun, Bengio, & Hinton (2015) establishes that academic institutions serve as key developers of the AI technologies that operate in the present. Universities create an environment that enables experimental discovery which leads to regular advancement of AI systems.

**2. RESEARCH METHOD**

The research design may be described for analyzing how schools develop AI talent to ensure industry needs. By combining both qualitative and quantitative research methods the study gives a complete understanding of how colleges can teach students about AI.

**2.1. Research Design**

The research combines both qualitative and quantitative methods to study this topic. Qualitative Analysis: Examines academic strategies, curriculum development, and industry-academia collaborations through a systematic literature review. Our research combines statistical business data with educational documents to check how much companies need business professionals who work with AI and which AI courses best teach students about this technology.

Table 1. Data Collection Methods

Method	Description	Source
Literature Review	Analyzes existing academic research on AI education, workforce trends, and skills gaps.	Peer-reviewed journals, books, and reports (e.g., IEEE, Elsevier, Springer).
Survey Analysis	Examines surveys on AI workforce demand, hiring trends, and employer expectations.	Reports from industry leaders (e.g., LinkedIn, McKinsey, World Economic Forum).
Case Studies	Evaluates university programs that successfully integrate AI industry requirements.	Case studies from institutions leading in AI education (e.g., MIT, Stanford, Oxford).
Statistical Reports	Assesses AI job market trends, employment growth, and skills demand.	Government and private sector reports (e.g., UNESCO, OECD, IBM AI Talent Report).

**2.2. Data Analysis Techniques**

This method examines the qualitative results of studies to find major subject areas in teaching AI. Descriptive Statistics Processes Numerical Survey Results and Report Data for AI Job Market and Student Education Measures. Research Checks the Results of Various AI Instruction Methods and Industry Connections Methods.

**2.3. Ethical Considerations**

All research sources follow APA standards to maintain proper academic conduct. The research uses public data sources to follow ethical standards and make all results easy to verify.

## 2.4. Limitations

Data from other sources contains built-in errors. Recent AI development rates could exceed the available data from current research and workplace studies.

## 3. RESULTS AND DISCUSSION

### 3.1. Results

This section displays our research outcomes from both the literature study and statistical data analysis plus case examination. Our findings show how educational programs in academia help prepare AI talent when they explain what works now and what challenges academic colleges face plus show the specific value of partnership with business partners.

#### 3.1.1. The Growing Demand for AI Talent and Skill Gaps

AI professional demand continues to rise quickly throughout multiple sectors, especially within healthcare combined with finance as well as manufacturing industries. According to the World Economic Forum (2023), AI jobs have increased by 74% throughout the last five years but companies experience difficulties hiring suitable AI experts. The 2022 Emerging Jobs Report from LinkedIn describes AI specialists together with machine learning professionals as two career choices that have become the fastest-growing fields globally.

Organizations continue to face an intense scarcity of AI talent while job advertisements for the field drastically increase. McKinsey & Company (2022) demonstrates that professional standards are not met by 40% of candidates applying for AI jobs especially within deep learning operations and AI ethics domain. The industry demands improved educational programs which provide vital practical AI skills to graduates to fill upcoming job openings.

#### 3.1.2. Effectiveness of AI Education in Academia

Top performing educational institutions like Stanford University and MIT and Oxford have revised their Artificial Intelligence academic programs to adapt to modern industrial developments in the field. The educational institutions have implemented main strategies as part of their initiatives.

Hands-on AI training, such as real-world projects, hackathons, and AI labs. The participation of industries within academic settings allows students to engage in practical training and research partnerships and structured AI educational activities. Faculty training programs unite artificial intelligence education with curriculum in business management, law, and medical subjects.

Many educational institutions maintain traditional teaching practices although these practices fail to deliver effective training for standard AI workplace issues. Russell & Norvig (2021) established that theoretical AI teaching methods fall short of matching what industries require in terms of practical AI learning. The AI Education Institute (2023) performed a survey that revealed that 63% of their AI students lacked the practical skills needed for AI job market entry despite finishing their educational programs.

#### 3.1.3. The Impact of Academia-Industry Collaboration on AI Workforce Development

Universities that work with industry partners deliver AI graduates who find better job opportunities and develop better practical abilities according to Brynjolfsson and McAfee (2022). Successful academia-industry partnerships include:

- a. Google's AI Residency Program: Provides university students with hands-on AI research experience.
- b. IBM supports universities with its AI Skills Academy to provide students with AI certification programs.
- c. The Stanford AI Lab performs research together with major AI companies and assists students in developing marketable skills.

Students who earn AI degrees through industry-supported partnership programs double their chances of finding AI-related jobs after graduation in less than half a year (OECD, 2023).

#### 3.1.4. Challenges in AI Education

Despite recent advanced education about AI in colleges and universities meets strong resistance from several important factors. University curricula take an extended time to update because AI technologies develop quickly (Jobin, Ienca, & Vayena, 2019). Developing nations have problems accessing AI computers and learning platforms because of UNESCO data from 2023. College students find it hard to apply what they have learned in theory since most AI programs deliver solely knowledge (LeCun, Bengio, and Hinton, 2015). Many universities do not teach AI ethics properly even though 70% of them worry about AI bias and responsibility issues (AI Now Institute, 2022).



### 3.1.5. Strategies for Enhancing AI Workforce Development

The research suggests these actions for universities to link AI teaching with modern industry standards: 1) Universities need to develop AI education programs that update their content based on new industry technology developments (Russell & Norvig, 2021); 2) Develop AI educational programs by bringing functional AI tasks and providing coding workshops plus AI internships (McKinsey & Company, 2022); 3) Academia needs better ties with industry when it comes to joint AI research plus offering both free expert guidance and AI startup development support to help students grow their AI abilities (Brynjolfsson & McAfee, 2022). Students should learn about AI's ethical effects and responsible development through taught AI courses according to Jobin, Ienca, and Vayena (2019).

## 3.2. Discussion

This study proves that universities need to prepare AI talent better to serve business needs that grow fast. Businesses from various sectors and technical areas require qualified AI professionals because AI technology is advancing quickly across healthcare finances and autonomous systems according to World Economic Forum data (2023). The difference between what students learn at school and what companies need in their employees creates problems when preparing the workforce. Our analysis examines the importance of working between academia and industry plus educational improvement to create skilled AI teams effectively.

### 3.2.1. Universities Teach AI Skills to Students

Academic institutions train most of today's AI professionals by giving students knowledge on fundamental machine learning and neural network concepts in data science according to Russell and Norvig's (2021) book. Research findings show that many universities cannot develop their AI curricula fast enough because they cannot match industry progress (McKinsey & Company, 2022). Top universities demand AI but developing nations cannot access AI labs because they lack basic components for AI training including computational resources and business connections (UNESCO, 2023).

The study method read both AI university courses and business feedback from several reports. According to the AI Education Institute, 63% of their students lack the knowledge to work with AI in real settings for their 2023 assessment. AI education programs that include real-world AI training established through employer-bonded activities help students get hired 40% more efficiently according to OECD data from 2023.

When AI education sticks only to book learning students develop useful skills void according to Brynjolfsson and McAfee (2022). The research shows that universities should teach AI using modern industry methods.

### 3.2.2. The Role of Industry-Academia Collaborations

Building connections between academic and business sectors effectively solves the lack of AI knowledge according to McKinsey & Company (2022). In this research organization members saw that AI majors who complete internships and research at companies excel at solving professional AI problems (OECD, 2023). Successful initiatives, as discussed, include Google's AI Residency Program, IBM collaborations, and Stanford AI Labs (Brynjolfsson & McAfee, 2022).

When higher education teams up with AI-led companies they train students who perform top-level AI research create machine learning projects and apply AI engineering methods effectively (World Economic Forum 2023). When AI institutions partner globally, they can make better programs for developing AI professionals.

### 3.2.3. Challenges in AI Education and Workforce Preparation

The academic system still needs to solve important problems when training AI professionals.

#### a. Slow Curriculum Updates

Universities need long periods to update their AI programs because AI technology develops rapidly. Educational institutions fall behind in updating their AI models and tools because of this gap which makes graduates learn outdated technology (Jobin, Ienca, & Vayena, 2019). Educational institutions should adopt an updateable system of AI teaching modules that align with new AI developments each year.

#### b. Limited Access to AI Resources

Developing countries struggle to learn AI because they need expensive AI systems and do not have enough cloud computing services (UNESCO 2023). Making AI education available online plus giving free access to AI tools worldwide helps students from every nation learn this technology equally.

#### c. 7.3.3 Theoretical Focus vs. Practical Learning

The authors Siau and Wang (2020) demonstrate through their research that practical training equals theoretical AI knowledge when developing professionals. Academic programs should: 1) New AI coding laboratories should be established while preparing real-world cases for students to develop hands-on learning experiences; 1) All undergraduate AI majors should follow a mandatory internship requirement

- as part of their academic curriculum; 3) Training sessions for AI deployment and both ethical principles and regulatory standards should be provided to staff (OECD, 2023).
- d. **The Lack of Ethical AI Training**  
The necessary domains of vital operations including hiring processes and healthcare as well as finance need immediate ethical AI training because AI makes these systems function. A study shows that AI ethics courses are conducted by universities at a rate of 30% in total (Stanford University, 2021). Academic institutions require the following sequence to develop responsible AI systems: Every educational institution must introduce AI ethics training together with fairness algorithm education for their complete AI learning program (Siau & Wang, 2020).

## 4. CONCLUSION

The sustainable development of AI personnel requires direct coordination between academic and industrial institutions. Results show that AI professional vacancies are surging throughout different sectors because higher education institutions function as basic AI training centers but struggle to adapt to fast-changing AI technologies (World Economic Forum, 2023). A deficiency of skills exists because AI graduates lack the necessary competence for practical applications (McKinsey & Company, 2022).

The study evaluated how academia tackles AI workforce demands by exploring program changes in educational material and developing relations between educational institutions and industrial organizations and providing instruction about ethical AI practices. The research shows universities must update their AI educational content while establishing training-based teaching models together with business partnerships within AI product sectors (Russell & Norvig, 2021). Developing countries face difficulties when it comes to AI education because they need better access to AI labs combined with cloud computing platforms and open-source learning infrastructure (UNESCO, 2023).

According to Siau and Wang (2020), researchers highlighted that ethical AI training remains fundamental because AI technology keeps strengthening its position within automatized systems and social frameworks. AI professionals who will enter the field in the future must battle ethical and biased AI solution development because they lack essential information about fairness mitigation along with bias reduction and accountability principles according to Stanford University (2021). The analysis foundation built from examining AI education and workforce reports backed up the need to adjust academic training approaches for evolving AI methodologies. The research findings generated practical guidelines that highlighted how education institutions can close their AI expertise shortage by providing practical education multidisciplinary AI education and enhanced academic-business partnerships (OECD, 2023).

Featured below is an actionable recommendation for academia to establish a sustainable AI workforce model. Universities must review their AI educational programs frequently as they consider modern industrial developments. The education should combine practical AI education through hands-on coding labs along with internship experiences along with conducting AI hackathon events. The educational sector needs to promote more active partnerships with both startup companies and AI research facilities and industrial establishments. The United Nations Educational Scientific and Cultural Organization aims to expand AI education access globally especially in developing economies according to its 2023 guidelines. Higher education institutions should teach AI ethics by establishing clear rules regarding prediction transparency as well as by maintaining program accountability and fairness.

Academia's commitment to these areas will establish a transformative system that delivers AI talent with technical abilities and strong ethical character. The achievement of AI-driven industries relies heavily on how academic institutions develop their students to handle upcoming challenges while seizing new opportunities. Upcoming research should study how changes to curricula together with cooperation between businesses and AI ethical standards affect the development of AI professionals over time.

Academia needs to adapt through proactive measures in order to maintain AI education as relevant as well as practical and prepared for the future. Universities which develop an active AI learning system will produce graduates who both transform AI forward with novelty and maintain ethical behavior to lead the AI revolution.

## REFERENCES

- Ahmed, S., & Thompson, N. (2023). What should be done about the growing influence of industry in AI research? Brookings Institution. Retrieved from <https://www.brookings.edu/articles/what-should-be-done-about-the-growing-influence-of-industry-in-ai-research/>

- Brynjolfsson, E., & McAfee, A. (2022). *The second Machine Age: Work, progress, and prosperity in a time of brilliant technologies*. W.W. Norton & Company.
- Faruqe, F., Watkins, R., & Medsker, L. (2021). Competency model approach to AI literacy: Research-based path from initial framework to model. *Advances in Artificial Intelligence and Machine Learning*, 2(4), 580-587. <https://doi.org/10.54364/aaiml.2022.1140>
- Katsamakos, E., Pavlov, O. V., & Saklad, R. (2024). Artificial intelligence and the transformation of higher education institutions. *Sustainability*, 16(14), 6118. <https://doi.org/10.3390/su16146118>
- McKinsey & Company. (2022). *The AI talent gap and the future of work*. McKinsey Global Institute Reports. Retrieved from <https://www.mckinsey.com/reports>
- OECD. (2023). *AI workforce trends and skills development*. OECD Digital Economy Papers, 334. <https://doi.org/10.1787/334-en>
- Siau, K., & Wang, W. (2020). Artificial intelligence education for students: An essential skill for the future. *International Journal of Information Management*, 50, 24-30. <https://doi.org/10.1016/j.ijinfomgt.2019.12.017>
- Soori, M., Arezoo, B., & Dastres, R. (2023). Artificial intelligence, machine learning and deep learning in advanced robotics, a review. *Cognitive Robotics*, 3, 54-70. <https://doi.org/10.1016/j.cogr.2023.04.001>
- Stanford University. (2021). *Gathering strength, gathering storms: One-hundred-year study on artificial intelligence (AI100) 2021 report*. Retrieved from <https://ai100.stanford.edu/gathering-strength-gathering-storms-one-hundred-year-study-artificial-intelligence-ai100-2021-1/sq8>
- UNESCO. (2023). *AI education in developing economies*. UNESCO AI Policy Reports. Retrieved from <https://unesco.org/reports>
- Wang, P., & Goertzel, B. (2022). The state of artificial general intelligence research. *Artificial Intelligence*, 299, 103574. <https://doi.org/10.1016/j.artint.2021.103574>
- World Economic Forum. (2023). *The future of jobs report*. World Economic Forum Publications. Retrieved from <https://www.weforum.org/reports>
- Xu, M., & Ouyang, H. (2022). *Role of artificial intelligence in workforce development*. American Institutes for Research. Retrieved from <https://www.air.org/sites/default/files/2023-11/Role-of-Artificial-Intelligence-Workforce-Development-Nov-2023-508.pdf>
- Zhang, B., & Dafoe, A. (2019). Artificial intelligence: American attitudes and trends. *AI & Society*, 34(4), 539-576. <https://doi.org/10.1007/s00146-018-0841-4>
- Zhang, Y., Gitzendanner, M. A., Maxwell, D. S., Richardson, J. W., Smith, K. E., Stubbs, E. A., Stucky, B. J., Zhang, J., & Deumens, E. (2021). *Building an AI-ready RSE workforce*. arXiv preprint arXiv:2111.04916. <https://doi.org/10.48550/arXiv.2111.04916>