

THE THREAT OF ARTIFICIAL INTELLIGENCE TO THE ACCOUNTING AND MANAGEMENT PROFESSION: THE VITAL ROLE OF HIGHER EDUCATION INSTITUTIONS IN INDONESIA

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ABSTRACT

The rapid development of Artificial Intelligence (AI) has raised global concerns about the automation of white-collar jobs. In Indonesia, this debate is urgent due to the high volume of standard clerical and cognitive jobs that are vulnerable to automation. This study aims to identify and analyse the threat mechanisms of AI to two strategic professions in accounting and management, and to formulate a comprehensive curriculum transformation agenda for higher education institutions. This study uses a literature review approach by reviewing literature from academic databases, industry reports (WEF, McKinsey, PwC, WordBank), and local data (e.g., the World Bank's Indonesia's Online Vacancy Outlook) from 2018 to 2025. The data was analysed using qualitative descriptive method. The results indicate that the threat of AI is shifting from total professional substitution to automation of routine tasks, which risks eliminating entry-level positions. The findings confirm that successful professions are those that transformation from compliance-based to AI-powered strategic advisors. This transformation requires accounting and management curricula to focus on data analytics, AI ethics, and critical thinking, moving away from the focus on basic calculations or procedures.

Keywords: Artificial Intelligence (AI); Accounting; Management; Higher Education Curriculum Transformation

INTRODUCTION

The rapid advancement of artificial intelligence (AI) technology has transformed professional tasks across various fields. A McKinsey study estimates that 400–800 million workers worldwide could potentially be displaced or impacted by automation by 2030 in a rapid adoption scenario (James Manyika, Susan Lund, Michael Chui, Jacques Bughin, Lola Woetzel, Parul Batra, Ryan Ko, 2024). Furthermore, the World Economic Forum (WEF) projects that AI will eliminate ~83 million global jobs and create ~69 million new jobs by around 2027 across several sectors (WEF, 2023). Moreover, the OECD report also shows that highly educated (white collar) workers are particularly vulnerable to the risks of disruption by AI (OECD, 2024). There is a rapid shift in demand for AI/data skills, while some easily automated roles are showing a decline in vacancies (PwC, 2024). The data show that the multinational company is reducing staff related to restructuring as the company focuses on AI. such as Microsoft, Google, Meta, Amazon, and others (Rikap, 2023).

In Indonesia, the phenomenon of white-collar workforce reduction is also occurring, although the cause is not explicitly stated AI (MRI, 2025). Since 2022, major companies have been laying off employees as part of restructuring efforts related to operational efficiency and digitalization, including GoTo, Shopee, Tokopedia, Blibli, and others (Santika, 2024).

The growth of AI presents significant issues and challenges the academics about the potential of AI to replace human jobs. including the accounting field (Afiqah Zamain & Subramanian, 2024; Tandiono, 2023). AI and automation could replace professionals jobs, increasing economic inequality and raising concerns about mass unemployment (Frank et al., 2019). These conditions must be urgently addressed to ensure long-term survival (Ballantine

et al., 2024). This situation requires proper management by the higher education sector to prevent future problems with the pressure of adapting appropriate educational programs and business practices (Tandiono, 2023; Veledar et al., 2024).

Several studies demonstrate that high-skilled workers who quickly adapt to the demands of AI technology experience increased well-being (Kashif Nawaz et al., 2025; Wang, 2025). Furthermore, organizations need to implement adaptive management in developing human resources to have an advantage in the era of globalization (Indriastuti et al., 2023). Another finding shows that Artificial Intelligence (AI) has transformed the domain in the higher education sector as it impacts the pedagogy of teaching and learning (Sabado, 2025).

Based on this description, the purpose of this paper is to identify the accounting and management professions most vulnerable to AI automation. Furthermore, it aims to offer insights for higher education institutions into necessary mitigation and adaptation measures.

METHOD

This paper uses a type of literature review by analyzing research results, papers, reports, and news articles related to AI and the future of work. Data sources come from secondary data, namely reports from international institutions (e.g., WEF, McKinsey, World Bank), and scientific journals. In addition, data also comes from official Indonesian institutions, such as ministries and agencies. Data analysis uses descriptive qualitative methods to describe and analyze the impact of AI based on the collected data. Profession mapping is used to identify routine, repetitive, or data-driven tasks that are easily automated. Curriculum adaptation that includes softskill, creative, or complex decision-making is described.

RESULT AND DISCUSSION

Result

The rise of AI is not predicted to wipe out the accounting profession entirely in Indonesia. The greatest threat lies in fundamental changes to job roles (transformation, not total substitution). [Table 1](#) shows the classification of professions based on AI threat levels. Based on the table, the accounting profession falls into the category of jobs with a moderate risk of being impacted by AI. Other results indicate that management professions such as marketing and human resource development fall into the weak threat category, as these professions require complex human interaction.

Table 1. Jobs with AI Treat

Threat Level	Job Characteristics	Example Professions	Source
High	Repetitive, rule-based tasks, data entry, high-volume processing.	<ul style="list-style-type: none"> • Administrative Staff • Data Operators • Call Center Agents • Factory Workers (Assembly Line). 	(Manyika et al., 2017)
Medium	Data analysis tasks, basic content creation, simple coding, repetitive graphic design.	<ul style="list-style-type: none"> • Accountants • Entry-Level Programmers • Content Writers • Journalists • Financial Analysts. 	(WEF, 2023)

Table 1. Continue

Threat Level	Job Characteristics	Example Professions	Source
Low	Tasks requiring complex human interaction, original creativity, leadership, or physical/local skills.	<ul style="list-style-type: none"> • Teachers/Educators • Therapists/Nurses • Original Artists/Creators • Construction Workers • Senior Managers. 	(OECD, 2024)

[Table 2](#) summarizes the national job map in accounting and management that identifies high-demand positions such as financial analyst and human resource manager. The data shows a shift from traditional administrative or transactional roles to more strategic, analytical, and digitally oriented roles. In accounting, the demand for advanced financial analysis skills is high. While basic accounting tasks are likely to be automated, demand for analytical roles is increasing. Accounting roles will evolve toward predictive and consultative financial analysis rather than transactional record-keeping. Financial and investment advisers and business intelligence analysts reinforce this shift, emphasizing the need to interpret big data and provide strategic investment advice.

Furthermore, in the management field, human resource management remains relevant, but may shift from administration to talent development and relationship management. Managerial positions, including cross-functional managers such as service and business administration managers, sales and marketing managers, supply, distribution, and related managers, as well as retail and logistics managers, remain in demand. Professionals with core business, supply chain, and service management skills will continue to be essential. Finally, high-level leadership positions, including managing directors and chief executive officers, will be indispensable.

Further findings highlight a strong emphasis on roles that bridge management with technology and the digital marketplace. Professions such as Digital Marketing Specialists, Advertising and Public Relations Professionals, and Advertising Professionals remain in demand. The data also indicates that professionals with the ability to lead and execute digital marketing strategies for business growth, identify new market opportunities, and foster partnerships will be crucial in the future.

Table 2. Future Jobs for Accounting and Management

Occupational Reference	Occupation	Source
Indonesia's Occupational Tasks and Skills (IndoTaSK) 2020	<ul style="list-style-type: none"> • Business service and administration manager • Sales and marketing manager • Supply, distribution and other related managers • Door to door salesman • Seller via contact center • Commercial sales representative • Personnel officer • Financial analyst 	(Wordbank, 2020)

Table 2. Future Jobs for Accounting and Management

Occupational Reference	Occupation	Source
Indonesia's Critical Occupation List (COL) 2018	<ul style="list-style-type: none"> • Warehouse Manager; Gateway Manager; Customs Manager • Area Manager, Branch Manager, and Regional Manager in Retail • Human Resources Manager • Relationship Manager; Brand Manager; Public Relations Manager • Production Planning and Inventory Control Manager; Merchandising Manager • Digital Marketing Specialist; Business Development Specialist 	(CMEF, 2020)
The Future of Jobs Report 2023	<ul style="list-style-type: none"> • Business Intelligence Analysts • Digital Marketing and Strategy Specialists • Business Development Professionals • Advertising and Public Relations Professionals • Financial Analysts • Financial and Investment Advisers 	(WEF, 2023)
Indonesia's Online Vacancy Outlook 2020	<ul style="list-style-type: none"> • Sales and marketing managers • Finance managers • Managing directors and chief executives • Accounting associate professionals • Accountants • Personnel and careers professionals • Commercial sales representatives • Advertising and marketing professionals • Management and organization analysts • Financial and insurance services branch managers • Supply, distribution and related managers • Human resource managers • Financial analysts 	(WBG, 2021)

Discussion

[Table 3](#) summarizes the three main strategic from experts that must be implemented by Higher Education in Indonesia in responding to the threats and opportunities of Artificial Intelligence (AI) in the fields of Accounting and Management. A holistic and integrated adaptation and implementing the strategy requires investment in people, including faculty and students, and fundamental changes in processes, including curriculum and pedagogy. The success of universities in the AI era will not be measured by the amount of technical material taught, but by the extent to which universities can produce intelligent, ethical, and critical graduates who are ready to become strategic AI partners in the industry.

Table 3. Higher Education Institution Strategy to AI Adaptation

Main Strategy	Specific Actions / Implementations	Objectives / Expected Results
I. Curriculum Revitalization (Chaitali Bhattacharya, 2025)		
1. Cross-Discipline AI Integration	Injecting AI principles (Machine Learning, GenAI) horizontally into core courses (Audit, Finance, Strategic Management), not just as elective courses.	Creating professionals who can test, critique, and control AI output (digital skepticism), shifting from technical implementers to strategic advisors.
2. Project Based Learning (PBL)	Applying AI-based PBL to real case studies of Indonesian companies (e.g., RPA audit simulation or performance predictive analysis).	Developing crucial soft skills competencies (data literacy, critical thinking, teamwork) that cannot be automated by AI.
3. Flexible Learning Path	Provides short-form certifications or minors in specific AI areas (e.g., Prompt Engineering for Accountants) outside of a traditional undergraduate degree.	Supporting the concept of lifelong learning and ensuring graduates have the latest skills (upskilling/reskilling) that are relevant to the pace of technology.
II. Lecturer Capacity Development (Aithal & Aithal, 2023; Alqarni, 2025)		
1. Intensive Lecturer Training Program	Conducting Train-the-Trainer trainings focused on AI pedagogy and ethical frameworks.	Addressing the competency gap of lecturers and changing their roles from content deliverers to facilitators, mentors, and learning journey designers.
2. Focus of Critical Pedagogy	Using AI as an intelligent tutoring system to automate theoretical learning, freeing up class time.	Shifting the focus of class time to critical discussions, applications to complex problems, and ethical discussions.
III. Industrial Collaboration and Innovation (Avilés Mariño & Sarasa Cabezuelo, 2025)		
1. Mandatory AI Project-Based Internship	Require industry internships that focus on digital initiatives and AI projects, rather than administrative tasks.	Providing experiential learning opportunities and bridging the gap between theoretical knowledge and real-world applications of technology.
2. Center for Ethics and Regulation Studies	Establish a think tank or study center that collaborates with regulators (OJK, Bank Indonesia) to study AI ethics and compliance.	Ensure graduates understand the ethical implications of AI (algorithmic bias, data privacy) and that AI applications align with domestic compliance and regulatory frameworks.

CONCLUSION

The threat of AI is a transformative inevitability that forces a radical reorientation across sectors, particularly in Accounting and Management. The primary implication is the need for Higher Education Institutions to immediately implement AI-proof curricula and promote lifelong learning models to ensure Indonesian graduates are prepared to become strategic partners of technology, not its victims.

An AI-resistant curriculum must focus on developing digital scholasticism, achieved through the integration of AI across disciplines. This means that HEIs must inject the principles of Machine Learning and Generative AI into core courses such as Audit, Finance,

and Strategic Management, so that graduates not only use AI but are also able to test, critique, and control AI output. These skills, along with crucial soft skills such as data literacy, critical thinking, and ethics, will facilitate a shift in professional roles from technical implementers to strategic advisors capable of addressing complex business problems.

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