

Research Article

Trends and Developments of Artificial Intelligence in Accounting: A Systematic Literature Review

Sindi Nadia^{1*}, Sambas Ade Kesuma², Keulana Erwin³, Fahmi Natigor Nasution⁴

¹ Mahasiswa Magister Akuntansi, Fakultas Ekonomi dan Bisnis, Universitas Sumatera Utara, Indonesia

² Fakultas Ekonomi dan Bisnis, Universitas Sumatera Utara, Indonesia

³ Fakultas Ekonomi dan Bisnis, Universitas Sumatera Utara, Indonesia

⁴ Fakultas Ekonomi dan Bisnis, Universitas Sumatera Utara, Indonesia

* Corresponding Author: sindinadia26@gmail.com

Abstract: This study aims to analyze the development and application of Artificial Intelligence in accounting using a Systematic Literature Review (SLR) approach. The data were obtained from the Scopus database using the keywords “Artificial Intelligence” and “Accounting” with a publication period from 2021 to 2026. The initial search resulted in 83 articles, which were then screened based on relevance, resulting in 26 articles. From these, 10 selected articles were analyzed in depth. The findings indicate that research on Artificial Intelligence in accounting has increased significantly in recent years. Artificial Intelligence has been applied in various areas, including financial reporting, auditing, fraud detection, and accounting education. In general, the use of AI improves efficiency, reduces human errors, and enhances the quality of accounting information. However, the implementation of AI also presents several challenges, such as technological readiness, the need for new competencies, and data security concerns. This study provides an overview of current research trends and the application of Artificial Intelligence in accounting, and highlights its important role in shaping the future of the accounting profession.

Keywords: Accounting Technology; Accounting; Artificial Intelligence; Digital Transformational; Systematic Literature Review.

Received: March 17, 2026

Revised: March 25, 2026

Received: April 12, 2026

Published: April 20, 2026

Current version: April 20, 2026



Copyright: © 2025 by the author.

Submitted for possible open

access publication under the

terms and conditions Creative

Commons Attribution license

(CC BY SA)

(<https://creativecommons.org/licenses/by-sa/4.0/>)

1. Introduction

The rapid development of Artificial Intelligence has transformed various industries, including the finance and accounting sectors. Artificial Intelligence technologies such as machine learning, automation and data analytics are increasingly being integrated into accounting practices to improve the efficiency, accuracy and the quality of decision-making processes (Temerbulatova et al., 2025). In recent years, the accounting profession has experienced major changes due to technological developments as Artificial Intelligence is used in various fields such as financial reporting, auditing, fraud detection and accounting education. This development has attracted the attention of academics so the number of studies on Artificial Intelligence has increase (Krishnanraw & Ismail, 2025).

The integration of AI in accounting extends beyond operational efficiency to impact organizational performance and strategic decision-making. Organizations are increasingly relying on intelligent systems to automate routine tasks, allowing accountants to focus more on analytical and advisory roles rather than traditional record-keeping activities (Bou Zakhem et al., 2025). This transformation demonstrates that AI is changing the landscape of the accounting profession by shifting the role of accountants toward strategic analysis, innovation, and value creation. Therefore, accounting professionals are required to develop new competencies that combine accounting knowledge with technological and data analysis capabilities (Morshed & Khrais, 2025).

The increasing use of Artificial Intelligence has also given rise to various discussions regarding ethical issues, cybersecurity risks, and new competencies required for accounting professionals. Several researchers emphasize that accountants need to develop analytical skills, technological capabilities, and cross-disciplinary understanding to adapt to an

increasingly AI-based work environment. Furthermore, the application of Artificial Intelligence also poses various challenges, such as data management, professional responsibility and the shift toward digital transformation in accounting education and practice (Chersan, 2025). This shows that the adoption of artificial intelligence is not only a technological change, but also a structural transformation in the accounting ecosystem.

Although the literature on this topic continues to grow, existing studies remain fragmented and focus on different aspects of artificial intelligence implementation. Therefore, a more comprehensive synthesis of previous research is needed to understand research trends and methodological approaches used in this field. Several studies also suggest that artificial intelligence can help improve efficiency in accounting processes and reduce human error through automation technologies (Al Najjar, Ghanem, et al., 2024). Artificial intelligence is a suite of technologies that work to support various business functions. In the field of accounting, the ever-evolving artificial intelligence has shifted traditional practices toward more modern approaches, influencing how organizations manage financial data and prepare reports. The effects include increased efficiency, transparency and accelerated audit processes with shorter timeframes. However, to truly benefit from artificial intelligence, accountants need to understand the technological and data analytics aspects of this major change, presenting challenges for adaptation (Ekadjaja et al., 2025).

Research on Artificial Intelligence in accounting continues to evolve. Previous studies have addressed diverse and often separate topics, such as technology adoption, accounting education, auditing, and financial reporting. This situation suggests a need for a more systematic mapping to understand the development of Artificial Intelligence research in accounting and how this technology is applied in accounting practice. Therefore, this study seeks to answer the following research questions:

- a. RQ1: What are the research trends regarding Artificial Intelligence in accounting?
- b. RQ2: How is the application of Artificial Intelligence in accounting practice based on previous research?

To answer this question, this study uses the Systematic Literature Review (SLR) method by analyzing previous research on artificial intelligence in accounting published in the 2021-2025 period with the aim of providing an overview of the development of Artificial Intelligence research in the field of accounting based on previously published literature.

2. Research Methods

This study used the Systematic Literature Review (SLR) method to collect and examine data from various scientific articles. This method was chosen because it provides an in-depth summary and helps identify current trends and gaps in previous research (Nordiansyah et al., 2025).

The data in this study were obtained from the Scopus database as the primary literature source because it provides reputable and internationally indexed scientific publications. The literature search was conducted using the keywords "Artificial Intelligence" AND "Accounting." The search was limited to articles published between 2021 until 2026 to ensure relevance to the latest developments in the accounting field.

The initial search yielded 83 articles. Next, a screening process was conducted based on the relevance of the title and abstract as well as their relevance to the research topic namely Artificial Intelligence in Accounting. Irrelevant articles, duplicates and research outside the accounting context were eliminated. After the screening process, 26 articles were deemed relevant and used as the initial dataset.

The next stage was a further selection process to determine the most representative articles based on research relevance, study focus and comprehensiveness of discussion. Through this stage, 10 key articles were selected for in-depth analysis in the results and discussion sections. These articles were selected based on their relevance to the research topic, clarity of research focus, and their contribution to understanding the application of Artificial Intelligence in accounting. In addition, the selected studies represent various important aspects such as financial reporting, auditing, education, and technology adoption. The analysis was conducted qualitatively by identifying the research theme, methods used, and main findings of each article to answer the research questions.

The selection process is carried out through several stages, namely identification, screening, and final selection. The study selection process followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach, which helps improve transparency and consistency in literature review studies (Rizkiyah, 2025). In accordance with PRISMA, this bibliometric analysis carries out an in-depth inspection of the source search, feasibility assessment, and data retrieval phases (Nefla & Jellouli, 2025).

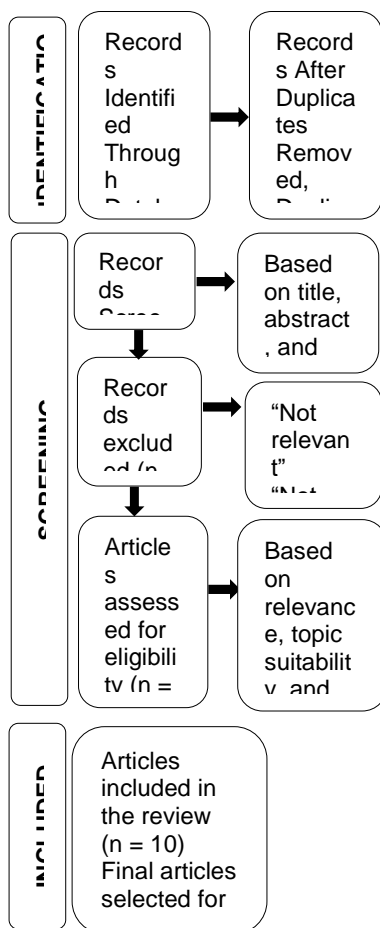


Figure 1. PRISMA Flow Diagram

3. Results And Discussion

This section presents and discusses research findings based on an analysis of selected articles on Artificial Intelligence in accounting. The discussion is structured to answer the research questions, specifically those related to research trends and the application of Artificial Intelligence in accounting. Furthermore, this section highlights the distribution of research areas and key findings from the reviewed studies.

Research Trends of Artificial Intelligence in Accounting

To answer the first research question, this section presents research trends in AI in accounting based on Scopus data. The analysis focuses on the number of publications per year and the distribution of research fields to provide a clearer picture of the development of this research.

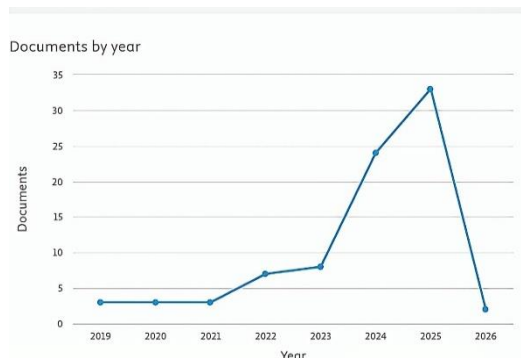


Figure 2. Trend of Publications on Artificial Intelligence in Accounting

Regarding the first research question, Figure 1 shows the trend of publications on Artificial Intelligence in accounting over time. The data indicates that the number of publications has generally increased in recent years. In the initial period, particularly from 2019 to 2021, the number of studies remained relatively low and stable, indicating that this topic is still in its early stages of development. Starting in 2022, the number of publications began to increase gradually, becoming more pronounced in 2023. A significant increase occurred in 2024 and continued into 2025, when the number of publications reached its peak. This trend reflects the growing interest of researchers in studying the role of Artificial Intelligence in accounting.

This increase in publications can be attributed to the rapid development of digital technology and the growing need for automation and data-driven decision-making in accounting practice. It also demonstrates how the accounting field is adapting to technological changes, with the increasing use of Artificial Intelligence.

The lower number of publications in 2026 is likely due to incomplete data for the current year. Overall, this trend indicates that research on Artificial Intelligence in accounting continues to grow and is expected to grow even further in the future.

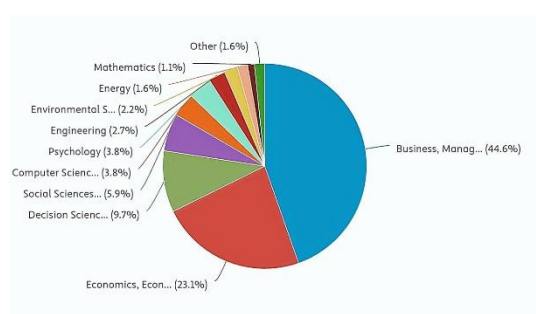


Figure 3. Distribution of Research on Artificial Intelligence in Accounting by Subject Area

Regarding the first research question, Figure 3 shows how Artificial Intelligence research in accounting extends across various disciplines. It can be seen that the majority of research is in Business, Management, and Accounting, which account for the largest proportion. This is followed by Economics and Decision Sciences, suggesting that research on Artificial Intelligence in accounting is closely related to economic analysis and decision-making processes. Other subject areas such as Social Sciences, Computer Science, and Psychology also contribute to the literature, although in smaller proportions.

Overall, this distribution shows that AI research in accounting has a broad scope and continues to expand into various fields.

Applications of Artificial Intelligence in Accounting

This section provides an overview of the studies that formed the basis of this systematic review. Ten high-quality articles were selected and analyzed to examine the application of Artificial Intelligence in accounting. These studies represent recent developments in this field and provide a foundation for understanding how AI is used in various accounting.

Table 1. Summary of Selected Studies on Artificial Intelligence in Accounting

Author (Year)	Research Focus	Main Findings
(Bou Zakhem et al., 2025)	Comparative evaluation of generative Artificial Intelligence models across accounting, economics, and HR	ChatGPT outperforms DeepSeek in accounting and HR, while DeepSeek performs better in economics, indicating domain-dependent performance differences
(Alnor, 2024)	The application of modern technologies including Artificial Intelligence in developing management accounting systems and their impact on organizational performance	Modern technologies improve organizational performance by automating routine tasks, reducing errors, and enabling predictive analytics for better decision-making
(Bou Reslan & Jabbour Al Maalouf, 2024)	To investigate the impact of Artificial Intelligence adoption on efficiency, financial data quality, fraud detection, tax reporting, and changes in accountants' work and skills	Artificial Intelligence adoption significantly improves efficiency and financial data quality, enhances fraud detection and tax reporting, and transforms accountants' work roles and required skills
(Krishnanraw & Ismail, 2025)	To examine factors influencing accounting students' intention to use Artificial Intelligence using the Technology Acceptance Model	Technology readiness and perceived usefulness significantly influence students' intention to adopt Artificial Intelligence. Artificial Intelligence is perceived as beneficial for improving analytical skills and future career readiness
(Buabeng-Andoh et al., 2025)	To identify critical success factors influencing the adoption of AI-based accounting systems and their impact on firm performance in SMEs	System quality, service quality, and information quality significantly influence the use and satisfaction of AI-based accounting systems, which in turn improve firm performance. Government regulation and internal control also support successful adoption
(Al Najjar, Mahboub, et al., 2024)	To examine whether Artificial Intelligence improves VAT reporting quality compared to traditional methods in emerging markets	Artificial Intelligence significantly improves VAT reporting quality by detecting accounting errors more accurately than traditional methods
(Altawalbeh et al., 2024)	To analyze the benefits and challenges of Artificial Intelligence implementation in accounting from professionals' perspectives	Artificial Intelligence improves accuracy, productivity, cost control, and fraud detection, but faces challenges such as high cost, training needs, and data privacy issues
(Anh et al., 2024)	To examine the effect of technology readiness on Artificial Intelligence adoption in accounting and auditing, with	Technology readiness positively influences Artificial Intelligence adoption, and this relationship is strengthened by perceived usefulness and ease of use

	perceived usefulness and ease of use as mediating factors	
(Chersan, 2025)	To analyze the impact of Artificial Intelligence on accounting education, including its influences, challenges, and opportunities in teaching and learning processes	Artificial Intelligence significantly influences accounting education by transforming curriculum, learning methods, and teaching tools, but also presents challenges such as lack of training, digital inequality, and the need for curriculum redesign
(Al Najjar, Ghanem, et al., 2024)	To examine the role of Artificial Intelligence in reducing accounting errors and improving tax reporting quality	Artificial Intelligence significantly reduces various accounting errors and improves reporting accuracy, although its effectiveness may vary depending on users capabilities and context

The analysis of the 10 selected articles indicates that research on Artificial Intelligence (AI) in the field of accounting is predominantly focused on the application of AI in improving efficiency, accuracy, and decision-making quality. Most studies highlight that AI is capable of automating accounting processes, reducing human errors, and enhancing the quality of financial reporting. In addition, several studies reveal that the implementation of AI significantly contributes to digital transformation in accounting, both in professional practice and accounting education. However, the adoption of AI also faces various challenges, including limitations in human resource capabilities, technological readiness, and the need for adjustments in curriculum and organizational systems.

Although the literature search in this study was conducted within the period of 2021 to 2026, the articles that met the inclusion criteria were dominated by recent publications, particularly from 2024 to 2025. This indicates that research on Artificial Intelligence in accounting is still evolving and gaining increasing attention in recent years. Overall, these findings suggest that Artificial Intelligence has significant potential to enhance the quality and efficiency of accounting practices. However, its implementation requires adequate readiness in terms of both technological infrastructure and human resource capabilities.

4. Conclusion

This study is a systematic literature review that provides an overview of the development and application of Artificial Intelligence in accounting. The findings show that research in this area has increased significantly in recent years, indicating a growing interest among researchers. This trend is closely related to rapid technological advancements and the increasing need for automation and data-driven decision-making in accounting practices.

Based on the analysis of articles obtained from the Scopus database, the results also show that Artificial Intelligence has been applied in various areas of accounting, such as financial reporting, auditing, fraud detection, and accounting education. In general, the use of AI helps improve efficiency, reduce human errors, and enhance the quality of accounting information. It also supports better decision-making and encourages a shift in the role of accountants toward more analytical and strategic responsibilities. In addition to these benefits, the use of Artificial Intelligence also presents several challenges, including the need for technological competencies among accountants, organizational readiness, as well as concerns related to data security and governance. These challenges indicate that the successful implementation of AI depends not only on technology but also on the readiness of human resources.

The analysis of publication trends and subject areas also shows that research on Artificial Intelligence in accounting is spread across several related fields and continues to grow. Most studies come from areas such as business, management, accounting, and computer science. This indicates that Artificial Intelligence is not only a technological tool but also a factor that is reshaping how accounting is practiced and developed.

Overall, the findings confirm that Artificial Intelligence plays an important role in shaping the future of accounting practices. This study provides a comprehensive overview of the development of research in this field. Future research is expected to explore the

implementation of AI more deeply across different industries and examine its long-term impact on organizations and the accounting profession.

References

- Al Najjar, M., Ghanem, M. G., Mahboub, R., & Nakhal, B. (2024). The role of artificial intelligence in eliminating accounting errors. *Journal of Risk and Financial Management*, 17(8), 1. <https://doi.org/10.3390/jrfm17080353>
- Al Najjar, M., Mahboub, R., Nakhal, B., & Gaber Ghanem, M. (2024). Exploring the role of AI in improving VAT reporting quality: Experimental study in emerging markets. *Journal of Risk and Financial Management*, 17(11), 2–13. <https://doi.org/10.3390/jrfm17110477>
- Alnor, N. H. A. (2024). Applications of modern technology in developing management accounting systems and how they affect the organizational performance. *WSEAS Transactions on Business and Economics*, 21, 2591–2601. <https://doi.org/10.37394/23207.2024.21.212>
- Altawalbeh, M. A., Al Frijat, Y. S., & Alhajaya, M. E. (2024). Pros and cons of using artificial intelligence in accounting: The dual effect and financial control. *International Review of Management and Marketing*, 15(2), 200–208. <https://doi.org/10.32479/irmm.17854>
- Anh, N. T. M., Hoa, L. T. K., Thao, L. P., Nhi, D. A., Long, N. T., Truc, N. T., & Xuan, V. N. (2024). The effect of technology readiness on adopting artificial intelligence in accounting and auditing in Vietnam. *Journal of Risk and Financial Management*, 17(27), 2–15. <https://doi.org/10.3390/jrfm17010027>
- Astuti, R., Nursita, M., & Karlina, L. (2024). Peranan artificial intelligence dalam revolusi akuntansi. *MPKM*, 1(02). <https://doi.org/10.66084/mpkm.v1i02.406>
- Bou Reslan, F., & Jabbour Al Maalouf, N. (2024). Assessing the transformative impact of AI adoption on efficiency, fraud detection, and skill dynamics in accounting practices. *Journal of Risk and Financial Management*, 17(12), 1–16. <https://doi.org/10.3390/jrfm17120577>
- Bou Zakhem, N., Bou Diab, M., & Tahan, S. (2025). A cross-disciplinary academic evaluation of generative AI models in HR, accounting, and economics: ChatGPT-5 vs. DeepSeek. *Administrative Sciences*, 15(11), 1–22. <https://doi.org/10.3390/admsci15110412>
- Buabeng-Andoh, F., Buabeng-Andoh, C., & Pavelkova, D. (2025). Investigating critical success factors in driving artificial intelligence-based accounting system acceptance and firm performance among SME users in Ghana: Employing a modified information system success model. *Management and Marketing*, 20(4), 16–31. <https://doi.org/10.2478/mmcks-2025-0017>
- Chersan, I.-C. (2025). The impact of artificial intelligence on accounting education. *Studies in Business and Economics*, 20(3), 107–134. <https://doi.org/10.2478/sbe-2025-0046>
- Ekadjaja, A., Renata Devinia, & Putri, M. H. D. (2025). Menghadapi tantangan akuntansi modern dengan solusi artificial intelligence. *Jurnal Serina Abdimas*, 3(2), 273–281. <https://doi.org/10.24912/jsa.v3i2.34791>
- Indriani, P. (2025). Peran artificial intelligence dalam akuntansi: Analisis bibliometrik. *Jurnal Mahasiswa Ekonomi & Bisnis*, 5(1), 436–443. <https://doi.org/10.37481/jmeb.v5i1.1213>
- Krishnanraw, J., & Ismail, K. (2025). Behavioural intention to use artificial intelligence (AI) among accounting students: Evaluating the effect of technology readiness. *Management and Accounting Review*, 24(1), 465–493. <https://doi.org/10.24191/MAR.V24i01-17>
- Morshed, A., & Khrais, L. T. (2025). Cybersecurity in digital accounting systems: Challenges and solutions in the Arab Gulf region. *Journal of Risk and Financial Management*, 18(1), 1–24. <https://doi.org/10.3390/jrfm18010041>
- Nefla, D., & Jellouli, S. (2025). Emerging technologies in finance: Challenges for a sustainable finance. *Cogent Business and Management*, 12(1). <https://doi.org/10.1080/23311975.2025.2495191>
- Nordiansyah, M., Arifuddin, & Mediaty. (2025). Artificial intelligence (AI) on accountant behavior and ethical decision making: Systematic review on behavioral accounting research. 4(2), 151–168. <https://doi.org/10.55980/eba>
- Rizkiyah, N. (2025). Strategi dan tantangan manajemen pendidikan tinggi: Systematic literature review menggunakan metode PRISMA. *Jurnal Ilmiah Literasi Indonesia*, (2), 194–202. <https://doi.org/10.63822/flxzej69>

- Temerbulatova, Z., Zhidebekkyzy, A., Sagiyeva, R., & Ludwiczak, A. (2025). Artificial intelligence as a driver of innovation and patent activity: An empirical analysis of cross-country data. *Economics and Sociology*, 18(3), 184–201. <https://doi.org/10.14254/2071-789X.2025/18-3/11>
- Yusuf, M. F. M., Sari, I. M., Hamid, A., & Garusu, I. A. (2023). Integrasi teknologi artificial intelligence dalam sistem akuntansi modern. *Journal of Trends Economics and Accounting Research*, 4(1), 230–234. <https://doi.org/10.47065/jtear.v4i1.902>