



# How Artificial Intelligence Has Impacted Accounting: A Systematic Literature Review

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**Abstract.** This article demonstrates the broad and deep integration between artificial intelligence technology and accounting. It presents the results of a literature review of various scientific articles on artificial intelligence and accounting. This review uses various international article sources to reach more widely about artificial intelligence in accounting. Artificial intelligence comes with various novelties. Where the novelty of this intelligence will have a positive or negative impact and provide challenges and opportunities in accounting for both academics, practitioners, and policymakers.

**Keywords:** Integration, Intelligence, Accounting, Review

## 1. INTRODUCTION

This study collects and analyzes literature from various sources related to accounting artificial intelligence. The presence of artificial intelligence will give accounting practitioners opportunities and challenges and will have a positive and negative impact on accounting in the future (Dang & Vu, 2023). Considered a new direction in the Industrial Revolution 4.0, digital technologies such as artificial intelligence (AI) allow accounting to be faster, more efficient, and more professional, but also bring greater challenges. So, this paper is here to provide a review of several studies related to how the impact of artificial intelligence in accounting.

## 2. LITERATURE REVIEW

‘Artificial Intelligence (AI)’ is a word that interests both die-hard enthusiasts and experts in the artificial intelligence community. The concept of man-made machines or intelligent beings that have the ability to think, learn, and make decisions independently has been a part of society's culture for decades (Hasan, 2022). Accounting, auditing, and financial reporting are areas where artificial intelligence (AI) technology has been utilized. One of the great benefits of using AI in accounting is the improvement of the quality of accounting information (Kindzeka, 2023). If accountants don't embrace change and appreciate new technologies, they could be sidelined from their work related to providing financial accounts to report past performance. They can also seize the opportunity to support

big data as a source of evidence that helps the decision-making process and reinvent the way businesses operate (Luthfiani, 2024).

### **3. METHODS**

Articles related to accounting artificial intelligence are discussed in this review. A systematic process is used to select articles that are truly relevant to the research objectives during a comprehensive study. How artificial intelligence functions in accounting is the subject of this research. One of the main methods of finding relevant publications is to use extensive international databases. This is due to its extensive collection of scientific literature and its reputation for providing reliable academic papers.

### **4. RESULTS**

According to research (Ballantine et al., 2024) the potential impact of generative artificial intelligence on accounting education and accounting colleges. The increasing and rapidly evolving growth of artificial intelligence poses significant problems and difficulties. For accounting to survive in the long term, accounting academics must urgently address these issues. The use of AI in accounting, which is an important component of the business accounting process, still faces ethical and legal issues. Companies are spending more capital to expand their operations, but the future will present new challenges and threats (Dang & Vu, 2023). To reach the next level, accounting must undergo a transformation. When it comes to accounting artificial intelligence research, interdisciplinary collaboration is essential (Hasan, 2022).

Practitioners are ready to upskill after seeing the need to reskill towards technology (Ban̄a et al., 2022). An overview of the key drivers that encourage accounting practitioners to use AI, including employers, professional bodies, and academic institutions, can help practitioners address key concerns and continue to support them in transforming their skills. Modern accounting may face the same problems as AI-based automated systems (Mohammad et al., 2020). To prevent this from happening, accountants not only need to change the way they use information technology but also need to change the way they act. In accounting, the deep integration of new technologies such as big data, machine learning, and artificial intelligence has resulted in major changes in the accounting profession. Some examples include re-engineering accounting procedures, reducing errors and distortions of accounting information, re-engineering accounting procedures, reducing errors and distortions of accounting information, re-engineering accounting procedures, reducing

errors and distortions of accounting information, and re-engineering accounting procedures (Alghafiqi & Munajat, 2022).

With respect to the research conducted in the field of AI in accounting and auditing, interdisciplinary collaboration is a must. It is expected that the wider application of AI in accounting and auditing will result in increased efficiency, productivity, and accuracy while addressing challenges such as income and wealth inequality, conventional job extinction, and unskilled labor (Luthfiani, 2024). To address the paradigm shift and prepare students, policymakers, and future professionals to face the challenges of a world comprised of big data, blockchain technology, and artificial intelligence for success in the fourth industrial revolution, educators, regulators, and professional associations must carefully prepare themselves.

AI and advances in deep learning, big data analytics, and cloud computing can improve accounting practices. These technologies help businesses in decision-making and efficiency, leading to better financial reporting and auditing processes (Abdullah & Almaqtari, 2024). Implementation challenges include ethical considerations, workforce adaptation, and data quality issues. Case studies show the potential uses of AI, such as strategic financial management, cost reduction, and better decision-making (Adeyelu et al., 2024). In the age of AI, accountants are experiencing a shift towards interpretation and strategic decision-making. Future trends such as the merging of AI with new technologies, continuous machine learning advancements, and regulatory impacts are studied.

Three topics can be discussed about the influence of AI on the accounting profession: automation of routine tasks, enhanced data analysis, and increased value of professional roles (Hussin et al., 2024). Automation of routine tasks includes data entry, validation, and transaction processing, while enhanced data analysis includes decision support and predictive analytics. AI also increases focus on value-added activities and improves scalability and cost. its ability to improve and reshape the correct method of operation in accounting, artificial intelligence is rapidly changing the world of accounting. Computers have replaced paper and pencil in accounting, but more important are programs that can reduce the amount of time spent on repetitive work, which reduces the number of errors (Stancu & Duțescu, 2021). General accountants believe that artificial intelligence will be used in accounting in the future, which shows promising prospects for transformation in accounting (Johnson et al., 2021).

Artificial intelligence (AI) has had a huge impact on all walks of life and has brought new opportunities and obstacles to many fields, including the accounting industry. Artificial

intelligence technology is similar to a double-edged sword (Jin et al., 2022). On the one hand, AI benefits the accounting industry and offers many opportunities, but it also creates problems, such as unemployed accountants and financial data leakage. This paper investigates how AI affects the accounting industry and offers strategies and recommendations to improve the industry. Primarily, the software is used to store document images, automatically capture invoice information, monitor invoice approvals, manage risks, and track user activities. (Lee & Tajudeen, 2020). The use of artificial intelligence-based accounting software has improved efficiency, productivity, customer service, flexibility, process governance, and the amount of labor saved. Factors such as automated data input have been made possible by AI, which has increased the scope of accounting and enabled contemporary accounting to integrate and process huge amounts of data. In addition, AI systems have changed the traditional accounting mechanism, allowing modern accounting methods to avoid the repetitive work required (Kindzeka, 2023).

## **5. DISCUSSION**

Artificial Intelligence has led to a ‘crisis that pushes towards change,’ which provides accounting academics with a unique opportunity to overcome the uncritical and problematic functionalist view of the discipline as well as the technical reductionism of accounting. It is hoped that the use of artificial intelligence in accounting learning and teaching practices will result in a renewed focus on dimensions of accounting that incorporate critical and broader social thinking (Ballantine et al., 2024). Accounting academics have helped to recognize the nature of the threats and challenges associated with artificial intelligence as well as capitalize on the opportunities that exist by continuing to provide critiques and critical perspectives. But accounting academics should be able to take accounting education back from the market and provide impetus that can make accounting education more relevant to modern society (Ballantine et al., 2024).

By encouraging accountants to be more creative and provide greater value to businesses, the adoption of AI can address issues such as ineffectiveness, inefficiency, and low added value (Dang & Vu, 2023). Overall, the influx of artificial intelligence into the industry is a good thing, as it can drive business growth and innovation and give companies a greater competitive advantage.

It is expected that the wider application of artificial intelligence in accounting and auditing will result in increased efficiency, productivity, and accuracy. However, it is also faced with challenges such as income and wealth inequality, loss of conventional jobs, and

unskilled labor (Hasan, 2022). To address the paradigm shift and prepare future students, policies, and professionals to face the world challenges caused by big data, blockchain technology, and artificial intelligence, which are part of the fourth industrial revolution, teachers, regulators, and professional associations must be prepared.

The use of information technology in all aspects of life, including the business environment, is a component that cannot be ignored in both current and future situations (Mohammad et al., 2020) Technology today is essential for businesses. Some people may think that AI and code will take over many jobs, such as accounting. However, daily work will change greatly, and people who know how to use IT tools and techniques in accounting will be more likely to survive and thrive than the old accounting experts. In the future, attention will turn to analysis instead of just combining financial data.

The world of accounting has changed due to advances in AI, big data, and machine learning. The accounting profession is evolving along with technological advances and assessing the impact of these developments on the future (Alghafiqi & Munajat, 2022). Both the difficulties and opportunities posed by AI for accounting professionals and the accounting education process accounting educators and professionals must know how to respond to these technological changes. They should also discuss more about what accounting professions, institutions, and graduates should do to face the challenges caused by technological changes.

To achieve beneficial results and reduce risks, accounting and auditing expertise together with AI technology is essential. Not only does this cooperation improve accuracy and efficiency, but it also ensures data security, ethical application of AI, and regulatory compliance. Accountants are critical to ensuring that the use of AI complies with company principles and prevents unethical decision-making (Abdullah & Almaqtari, 2024). This holistic approach shows that artificial intelligence has the potential to transform economic organization and how important effective collaboration between artificial intelligence and accounting skills is.

The rise of artificial intelligence in accounting indicates a paradigm shift in accounting work. Accounting now has more strategic responsibilities and makes more money, while accounting has traditionally concentrated on data entry, compliance, and financial reporting. Accountants are moving from manual data processing to being interpreters and strategic decision-makers in the AI era and utilizing AI as a tool to enhance their professional capabilities. With routine tasks automated, accountants can devote more time to analyzing

complex financial scenarios, interpreting AI-generated insights, and providing strategic guidance to stakeholders (Adeyelu et al., 2024).

Artificial intelligence (AI) is gaining importance, especially in accounting. AI is used by many accounting software solutions to automate mundane tasks such as data entry and reconciliation. AI tools allow accountants to quickly and accurately analyse financial data, which provides critical information for strategic decision-making (Hussin et al., 2024).

Research on artificial intelligence solutions in this field is not new. However, in recent years, the attention of researchers has increased. Despite material progress, the desire of businesses to use AI solutions in accounting does not seem to be supported by data (Stancu & Duțescu, 2021). Moreover, an important element of this reality is the ability of experts to quickly adjust to new circumstances and acquire the necessary skills to work with AI and overcome the fear of job loss.

The majority of accountants surveyed were either slightly or somewhat familiar with the use of artificial intelligence in accounting (Johnson et al., 2021). However, most of the accountants surveyed do not use AI in their companies, and only a small number of accountants currently use AI to complete accounting tasks and procedures.

It is imperative to combine artificial intelligence technology with accounting work because it can improve the quality and efficiency of accounting work and promote the growth of the accounting industry (Jin et al., 2022). However, keep in mind that AI technology has both benefits and drawbacks. For example, it can improve the efficiency of accounting work and meet high requirements to help management decision-making. However, there are also some negative impacts on accounting work, such as increasing the possibility of unemployment for low-end financial practitioners or increasing the possibility of data leakage. In today's digital era, AI has become part of everyone's daily life. It is also the driver of IR 4.0, which has affected every aspect of human life and corporate business (Lee & Tajudeen, 2020). In the future, policymakers should ensure the standardization of AI systems within the accounting paradigm so that high-quality systems can comply with accounting principles (Kindzeka, 2023).

## **6. CONCLUSION**

Business processes around the world have been transformed by artificial intelligence and other technological advances. If AI is used in any business process, accounting has the opportunity to be involved or affected by its implementation. The view that accounting processes are undergoing transformation is supported by the widespread application of AI. This

enables the emergence of innovative disruptions in this field. AI in accounting is changing the way financial data is processed, interpreted, and utilized. This results in a more in-depth and efficient approach to handling complex tasks in finance.

## LIMITATION

This study is limited to the results of previous studies conducted in a review that has no empirical research results. So, suggestions for future researchers to be able to conduct empirical research and explore matters relating to artificial intelligence in accounting.

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