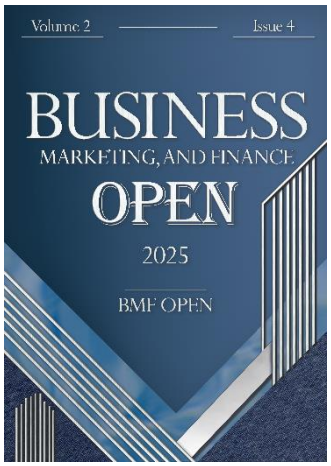
# Developing a Qualitative Model of Artificial Intelligence Based on Accounting Procedures

**Amir Aghaalizadeh Darandashi[1], Gholamreza Zomorodian[2,*], Fatemeh Samadi[3] and Hossein Badiei[4]**




[1] PhD Student, Department of Accounting, Kish International Branch, Islamic Azad University, Kish Island, Iran;
[2] Associate professor, Department Of Financial Management, Central Tehran Branch , Islamic Azad University, Tehran, Iran;
[2] Associate Professor, Department Of Financial Management, East Tehran Branch , Islamic Azad University, Tehran, Iran;
[2] Assistant Professor,Department Of Accounting , South Tehran Branch , Islamic Azad University, Tehran, Iran;

* Correspondence: gh.zomorodian@gmail.com

**Citation**: Aghaalizadeh Darandashi, A., Zomorodian, G., Samadi, F., & Badiei, H. (2025). Developing a Qualitative Model of Artificial Intelligence Based on Accounting Procedures. *Business, Marketing, and Finance Open*, 2(4), 1-11.

Received: 02 March 2025
Revised: 02 April 2025
Accepted: 17 April 2025
Published: 01 July 2025



**Abstract:** In today's rapidly evolving world of modern technologies, artificial intelligence has emerged as a key factor in improving processes and enhancing efficiency across various domains. This study aims to develop a model for leveraging artificial intelligence in accounting procedures. The primary objective of this research is to identify and integrate the factors influencing the automation and optimization of accounting processes using machine learning algorithms and artificial intelligence. Employing a mixed-methods research approach and utilizing qualitative content analysis, this study presents a comprehensive framework that can enhance the accuracy, transparency, and speed of accounting functions. In this study, the main components and subcomponents related to the application of artificial intelligence in accounting were identified and analyzed. The research findings indicate that elements such as accounting data and information, machine learning models, intelligent accounting systems, data security, predictive analytics, compliance with laws and regulations, and the acceptance and cultural adaptation of artificial intelligence play a crucial role. Using qualitative and analytical methods, this study explores the challenges and opportunities organizations face in implementing artificial intelligence in accounting. The findings demonstrate that adopting the proposed model can lead to a reduction in human errors, improved reliability of financial reports, and enhanced financial information transparency within companies. Furthermore, statistical analysis results indicate a significant and positive impact of artificial intelligence on improving the quality of financial reporting and managerial decision-making. This model can serve as a strategic tool for increasing organizational efficiency, particularly in competitive and digitally driven environments.

**Keywords:** Artificial intelligence, machine learning, digital accounting, process automation, financial reporting, financial information transparency, structural equation modeling.

## 1. Introduction

Artificial intelligence (AI) in accounting refers to the application of advanced computational technologies, primarily machine learning and data analytics, to perform tasks traditionally carried out by human accountants [1]. This includes developing algorithms and systems capable of analyzing financial data, making predictions,

automating repetitive processes, and enhancing decision-making in accounting and finance [2, 3]. AI in accounting encompasses a broad range of technologies, such as natural language processing, robotic process automation, and predictive analytics, all aimed at optimizing and enhancing accounting practices. Essentially, AI transforms the way financial information is processed, interpreted, and utilized, offering a more efficient and transparent approach to handling complex financial tasks. The integration of AI facilitates the automation of routine and time-consuming activities, allowing accountants to focus on higher-value tasks, strategic planning, and interpreting financial insights [4, 5].

The historical evolution of AI in accounting can be traced back to the late 20th century, when computers began to play a significant role in financial processes. Initially, the focus was on automating manual calculations and data entry. With the emergence of more sophisticated computational technologies and the expansion of big data, the accounting profession gradually shifted toward incorporating AI elements. In the 21st century, the advent of machine learning algorithms and advanced analytics marked a turning point in the integration of AI into accounting practices [6-8]. Software solutions capable of learning from historical data, identifying patterns, and making predictions began to emerge. As cloud computing gained prominence, the accessibility and scalability of AI solutions increased, enabling both large enterprises and smaller accounting firms to leverage these technologies.

Real-world examples and case studies illustrate AI's transformative power in improving efficiency and accuracy in financial management [9]. Recognizing AI's transformative potential also requires acknowledging the barriers and challenges it presents. This article addresses issues related to data quality, workforce adaptation, and ethical considerations, shedding light on the complexities and potential pitfalls associated with AI integration in accounting. Automation of data entry and reconciliation processes is one of the most significant advancements in AI-driven accounting [10-12]. AI systems designed with machine learning algorithms can process large volumes of financial data with high accuracy and speed. This includes extracting data from various sources such as invoices, receipts, and bank statements, followed by the reconciliation of this information [4, 13]. By automating these routine tasks, AI significantly reduces the likelihood of human errors, enhances accuracy, and frees up valuable time for accountants to focus on more complex and strategic aspects of their work. AI-powered tools employing natural language processing and machine learning have revolutionized transaction categorization. These technologies enable systems to understand and classify transactions based on contextual information, improving the precision of financial data classification. This automation ensures that transactions are appropriately labeled, reducing the need for manual intervention and streamlining the overall accounting process [10-12]. The efficiency gained in transaction categorization contributes to faster financial reporting and decision-making.

AI's predictive analytics capabilities allow machine learning models to analyze historical financial data and identify patterns, generating accurate forecasts for future financial performance. This capability provides organizations with valuable insights into financial trends, enabling them to make informed decisions and adapt to changing market conditions. By analyzing vast datasets and identifying potential risks, AI systems can assist in assessing and mitigating financial, operational, and compliance risks. Machine learning models can evaluate historical data to predict risk factors and emerging trends, helping organizations manage and minimize risks. This proactive approach is particularly valuable in a rapidly evolving business environment, where early risk detection can lead to better decision-making and financial stability [14].

AI empowers accountants with real-time monitoring capabilities, allowing for the detection of fraudulent activities as they occur. Through continuous transaction and pattern analysis, AI systems can swiftly identify anomalies and suspicious activities. Real-time monitoring is a critical tool for preventing financial fraud, as it

enables immediate intervention and mitigation measures. This capability is particularly relevant in today's digital landscape, where financial transactions occur at unprecedented speed and volume. AI's pattern recognition capabilities play a fundamental role in fraud detection. Machine learning algorithms can learn from historical data to identify irregularities or patterns associated with fraudulent activities. This proactive approach allows organizations to implement preventive measures and strengthen internal controls. By leveraging pattern recognition, AI contributes to a more robust and resilient financial ecosystem, minimizing the risks associated with fraudulent behavior [15].

The implementation of AI in accounting depends on data availability and quality. Inaccurate or incomplete data can compromise the effectiveness of AI algorithms, leading to erroneous conclusions and decision-making [5]. Challenges may arise from data entry errors, inconsistencies across different data sources, or outdated information. Addressing these issues requires a robust data management framework, validation processes, and continuous monitoring to ensure the accuracy and completeness of data used by AI systems. The integration of AI in accounting often involves managing sensitive financial information [16]. Ensuring data privacy and security is a fundamental concern. Compliance with data protection regulations is essential. Organizations must implement stringent security measures, encryption protocols, and access controls to safeguard financial data from unauthorized access, breaches, or cyber threats [17, 18]. Balancing data accessibility for AI applications while maintaining strong security measures remains a persistent challenge.

Successful AI implementation in accounting requires a skilled and adaptable workforce. Training and upskilling accountants to effectively use and manage AI tools is a critical challenge. This includes providing education on AI technologies, data analytics, and interpreting AI-generated insights. Continuous training programs are necessary to keep accountants informed about AI's evolving capabilities and to ensure they can leverage these technologies to enhance their roles rather than be replaced by them. Resistance to technological change is a common challenge when introducing AI into accounting firms [19]. Accountants may be accustomed to traditional methods and processes, leading to skepticism and concerns about AI adoption. Overcoming resistance requires effective change management strategies, transparent communication about AI's benefits, and demonstrating how these technologies complement rather than replace human expertise. Fostering a culture of continuous learning and innovation is crucial to overcoming resistance and creating a workforce that embraces AI [14].

AI algorithms are susceptible to biases present in historical data used for training. In accounting, such biases may influence decision-making processes, potentially leading to unfair outcomes or reinforcing existing inequalities. Addressing bias in AI algorithms requires a concerted effort to identify and mitigate biases throughout development and training phases. Regular audits and reviews of AI models can help ensure fairness and prevent unintended consequences in financial decision-making [5]. Ethical considerations extend to transparency and accountability in AI systems [6]. Understanding how AI algorithms reach decisions is crucial for both internal stakeholders and external regulators. Ensuring transparency involves providing clear explanations of AI-driven processes, making it easier for accountants to interpret and validate AI-generated insights. Additionally, establishing accountability frameworks to determine responsibility for AI-driven decisions and actions is essential.

The integration of artificial intelligence (AI) into accounting practices has been extensively explored in recent studies, highlighting its transformative impact on financial reporting, auditing, and strategic decision-making. Adialo et al. (2024) examined the multifaceted effects of AI in accounting, emphasizing advancements such as automation of routine tasks, predictive analytics, and fraud detection, while also addressing challenges related to data quality, workforce adaptation, and ethical considerations. Similarly, Odonkor et al. (2024) investigated how

AI is reshaping traditional accounting methods, demonstrating its role in improving financial reporting accuracy and efficiency, but also acknowledging the need for skilled personnel and addressing concerns related to data privacy and integration costs [10-12]. Hussin et al. (2024) further analyzed AI's impact on the accounting profession, categorizing its influence into task automation, data analytics, and the enhancement of professional roles [20]. Layadi (2023) highlighted the necessity for accountants to adapt to AI-driven changes to remain relevant in an evolving industry [21]. Marthen (2023) focused on AI's potential to replace accountants due to technological advancements stemming from Industry 4.0 [22]. Tandiono (2023) investigated the impact of AI on accounting education, calling for curriculum adjustments to align with technological advancements [23]. Zhang et al. (2023) analyzed the ethical implications of AI in managerial accounting, identifying issues such as data privacy, transparency, and accountability [24]. Ebrahimi et al. (2024) explored AI's role in financial risk assessment, demonstrating its capacity to improve data processing speed and analytical depth [25]. Ashraf and Mehtari (2023) examined AI's impact on accounting information systems, concluding that AI enhances accuracy and financial data analysis capabilities [26]. Bagherian et al. (2023) assessed AI's role in accounting systems, emphasizing the need for academic institutions to integrate AI into accounting education [27]. Azar-Saeed and Rostami (2023) discussed ethical decision-making in AI-driven accounting, identifying key challenges such as transparency, accountability, and privacy [28]. Kord (2023) explored AI's impact on project management, highlighting its potential to optimize resource allocation and risk management [29]. Javanmiri (2023) examined AI's strategic role in financial technology, forecasting its influence on financial decision-making [30]. Kazemi and Safari (2023) designed an AI-driven marketing model, showcasing AI's ability to enhance data-driven marketing strategies [31]. Shah Nazari and Motamdenia (2023) explored AI's opportunities and challenges in financial markets, emphasizing both efficiency improvements and associated risks [32]. Vaqefi and Daqaein (2022) investigated AI applications in accounting and auditing, asserting that AI not only automates processes but also enhances the credibility and accuracy of financial information [33]. Collectively, these studies demonstrate AI's profound impact on accounting, offering both opportunities for efficiency and strategic improvement while necessitating careful consideration of ethical, technical, and workforce-related challenges.

The objective of this article is to examine the multifaceted impact of AI on accounting practices, aiming to provide a comprehensive understanding of the current landscape in this field. The article explores how AI has transformed accounting processes, with a focus on areas such as automation of routine tasks, predictive analytics, and fraud detection. The significance and necessity of research in developing an AI-based accounting framework stem from rapid technological advancements and the increasing demand for efficiency, accuracy, and speed in financial and accounting tasks. The growing complexity and volume of financial data have posed significant challenges to traditional accounting methods, including human errors, time-consuming processes, and risks associated with financial fraud. AI, with its ability to automate repetitive tasks, enhance financial forecasting, and intelligently detect anomalies, can significantly mitigate these challenges. This study not only addresses current accounting limitations but also contributes to creating an innovative framework for utilizing advanced financial technologies, improving reporting accuracy, and expediting strategic financial decision-making. Consequently, the need for developing such a model to enhance accounting performance in organizations and financial institutions is more urgent than ever.

## 2. Methodology

The present study is an applied research based on its objective and follows a descriptive-survey method in terms of data collection. Initially, the study examines various aspects and research topics related to developing an artificial intelligence (AI)-based model for accounting procedures, including advancements, challenges, and opportunities, along with a review of similar studies and prior research on the subject. Subsequently, based on field studies, hypotheses will be formulated in alignment with the research title and objectives.

According to the four established theoretical perspectives in theory development—namely, extending or improving existing theories, comparing different theoretical perspectives, examining a specific phenomenon using multiple theoretical viewpoints, and investigating a documented and recurring phenomenon in a new environment and context—this research falls under the fourth category. Based on its applied nature and data collection approach, the study employs the Delphi method and is both survey-based and field-oriented.

The qualitative section of this study consists of two phases. The first phase involves the systematic literature review technique to establish the theoretical framework and identify the components of the AI-based model for accounting procedures, which is further elaborated in the following sections. The second phase focuses on validating the identified criteria and developing the initial model using the grounded theory approach as the core research strategy, relying on interviews for data collection. The qualitative phase of this study is conducted using MAXQDA software.

## 3. Findings and Results

Since the objective of this study is AI-based accounting procedures, the data analysis in this section is performed using qualitative methods. The required variables for the research model are extracted from interviews, and their relationships are determined.

In the data analysis process, the research validity is initially assessed using the Lincoln and Guba (1980) method, while reliability is examined based on the internal agreement method. Following this, descriptive statistics of the interview participants are presented, and then the data are analyzed to extract codes, categories, and relationships between them using MAXQDA software.

For assessing the research validity, the Lincoln and Guba (1980) method, which is based on four key criteria—transferability, credibility, dependability, and confirmability—was employed, confirming the validity of the research instrument.

**Table 1. Research Validity Based on the Lincoln and Guba (1980) Method**

| Criterion | Process |
|---|---|
| Transferability | Surveying experts who did not participate in the study. |
| Credibility | Spending sufficient time on the research and verifying interview data with the participants. |
| Confirmability | Documenting all steps followed in the research process and maintaining research records. |
| Dependability | Recording all details and taking notes during interviews. |

To evaluate the reliability of the research, two individuals who were not involved in the study were asked to code five interview transcripts after receiving the necessary explanations and training. This allowed for measuring and comparing the level of reliability.

**Table 2. Research Reliability Using the Internal Agreement Method**

| Interview | Number of Extracted Codes | Number of Agreements | Agreement Percentage (Reliability Score) |
|---|---|---|---|
| Interview 1 | 43 | 37 | 86.05% |
| Interview 4 | 51 | 42 | 82.4% |

| | | | |
|---|---|---|---|
| Interview 5 | 37 | 30 | 81.1% |
| Interview 9 | 34 | 25 | 73.53% |
| Interview 11 | 28 | 23 | 82.1% |

As shown in the table above, the internal agreement rate for the five interviews is above 70%, indicating an acceptable level of reliability for the conducted interviews and the extracted codes.

To extract the necessary variables for the research model in addressing the domain-specific issues of experts, various methods are employed. These methods can be categorized in multiple ways, one common approach being classification based on how knowledge is obtained from experts. Accordingly, two main categories of knowledge extraction methods are direct and indirect extraction.

Direct methods involve explicitly requesting explanations from experts regarding how tasks are performed. The success of these methods depends on the expert's ability and willingness to share their knowledge. In such cases, information is readily conveyed by the expert, except when the task has been performed so frequently that the expert considers the knowledge self-evident.

Indirect methods are employed to access information that experts may find difficult to articulate explicitly. In addition to interaction-based classification, methods can also be categorized based on the type of information they provide, which will be discussed in this section.

This research adopts the direct method, whereby interviews are conducted to understand and extract the required research variables. The concepts obtained from the interviews undergo open coding, followed by categorization, and ultimately axial coding to derive the research model. The same approach was applied to extract additional concepts from the interview data. The complete coding process is illustrated in the following table.

**Table 3. Open Coding Process for Expert Interviews**

| Subcomponents | Main Component |
|---|---|
| Data quality, data integration, data accessibility, data preprocessing, cloud storage, data connectivity | Accounting data and information |
| Selection of appropriate algorithms, interpretability, continuous model improvement, supervised and unsupervised algorithms | Machine learning models and algorithms |
| Integration with existing systems, user-friendly interface design, processing speed, process automation, scalability | Intelligent accounting systems |
| Protection of sensitive information, data encryption, access management, error detection and resolution, cybersecurity | Risk management and data security |
| Trend analysis, financial flow forecasting, scenario simulation, improvement of strategic decision-making | Decision-making and predictive analytics |
| Compliance with accounting standards, data protection regulations, implementation of financial transparency policies, compliance monitoring | Regulatory compliance |
| Employee training, organizational awareness enhancement, resistance to change management, restructuring traditional systems | AI adoption and cultural integration |

As shown in the table above, 35 sub-themes and 7 main themes were identified from the interviews.

The data collection process continues until the researcher reaches the point of theoretical saturation, meaning that the concepts related to the phenomenon under study, as mentioned by various interviewees, become repetitive, and no new information is added to the model. The following table illustrates how this criterion was achieved in the present study.

**Table 4. Achieving Theoretical Saturation**

| Interview | Frequency of Open Codes | Number of Concepts | Completion of Previous Concepts | Emergence of New Categories | Completion of Previous Categories |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Accounting data and information | 83 | 45 | - | 11 | - |
| Machine learning models and algorithms | 62 | 61 | 16 | 3 | 2 |
| Intelligent accounting systems | 69 | 67 | 6 | 3 | 1 |
| Risk management and data security | 48 | 69 | 2 | 2 | 5 |
| Decision-making and predictive analytics | 48 | 57 | 1 | 3 | - |
| Regulatory compliance | 37 | 54 | - | 2 | 3 |
| AI adoption and cultural integration | 36 | 59 | 2 | 3 | 2 |

This table demonstrates that the research reached theoretical saturation, as new categories gradually decreased while previous concepts and categories were completed, confirming the robustness of the data collection process.

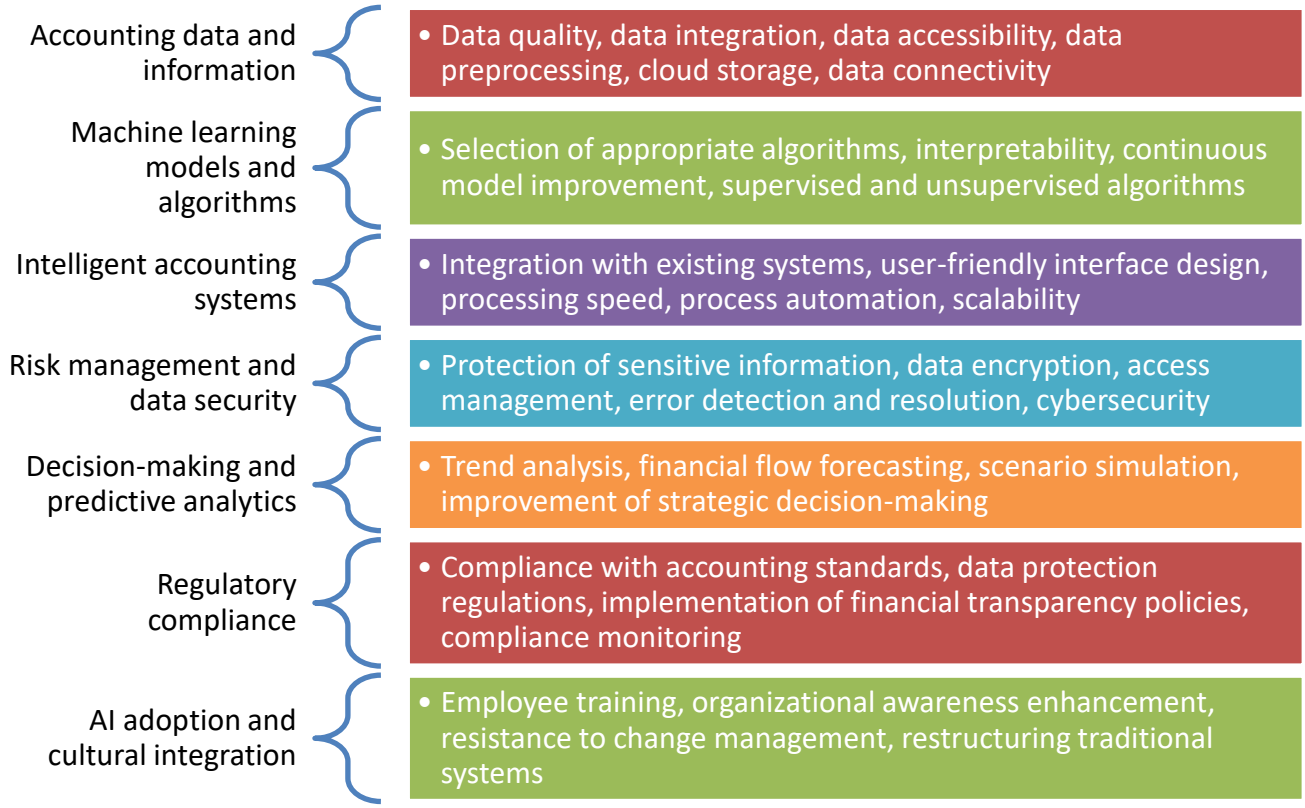



**Figure 1. Final Model of The Study**

## 4. Discussion and Conclusion

The findings of this study highlight the transformative role of artificial intelligence (AI) in accounting procedures, demonstrating its potential to enhance efficiency, accuracy, and decision-making in financial reporting. The results indicate that AI-driven automation significantly reduces human errors, streamlines routine accounting tasks, and facilitates predictive analytics for strategic financial planning. Participants in this study emphasized that AI's integration into accounting practices has improved data accessibility, strengthened fraud detection mechanisms, and enabled real-time financial monitoring. The research model identifies key components influencing AI adoption, including data quality, machine learning models, intelligent accounting systems, risk

management, regulatory compliance, and organizational culture. These findings align with previous research, which has consistently underscored the benefits of AI in accounting while acknowledging the challenges associated with implementation [2, 10-12].

One of the most significant findings of this study is the impact of AI on financial data processing and reporting accuracy. AI-powered systems enhance the speed and precision of financial transactions, minimizing discrepancies and ensuring compliance with accounting standards. Additionally, AI's ability to automate data reconciliation, detect anomalies, and prevent fraudulent transactions has been well-documented in the literature [29, 34]. Fraud detection capabilities, enabled by machine learning algorithms, allow accountants to identify suspicious activities more effectively than traditional methods, thereby enhancing the integrity of financial reporting [20].

Moreover, the findings suggest that AI significantly influences decision-making processes in accounting by enabling advanced predictive analytics. The ability of AI to analyze vast datasets, identify trends, and generate financial forecasts enhances the strategic planning capabilities of organizations. This corroborates the findings of Adiri (2024), who demonstrated that AI-driven financial modeling improves decision-making accuracy and allows organizations to anticipate market fluctuations. Similarly, Zhang et al. (2023) emphasized that AI's predictive capabilities provide valuable insights for risk assessment and investment strategies [24]. The ability of AI to process historical financial data and simulate multiple economic scenarios enhances organizations' adaptability to dynamic market conditions, supporting the strategic financial management role of accountants [25].

However, this study also identifies key challenges that hinder the widespread adoption of AI in accounting. One major challenge is data quality, as inaccurate or incomplete datasets can compromise the reliability of AI-driven analyses. As documented by Mohammadi et al. (2024), AI's effectiveness is heavily dependent on high-quality, structured data. Organizations struggling with fragmented financial information may face difficulties in leveraging AI's full potential [35]. Furthermore, the research highlights workforce adaptation as a critical barrier to AI implementation. Resistance to AI adoption among accounting professionals stems from concerns regarding job displacement and the complexity of AI-driven systems. Previous studies have also reported similar concerns, indicating that accountants may require specialized training to effectively integrate AI into their workflows [21].

Another significant finding pertains to the ethical implications of AI in accounting. The study reveals that issues related to transparency, accountability, and regulatory compliance remain major concerns in AI-driven financial practices. Zhang et al. (2023) discussed the ethical risks associated with AI, such as algorithmic bias, data privacy violations, and reduced human oversight in decision-making. The absence of clear accountability frameworks for AI-driven financial decisions raises concerns about the reliability and fairness of automated accounting processes. Similar findings by Azar-Saeed and Rostami (2023) highlight the necessity for organizations to establish ethical guidelines and compliance measures to ensure responsible AI deployment in accounting and auditing [28].

Furthermore, the study identifies the role of organizational culture in AI adoption, emphasizing that successful implementation requires a supportive and adaptive corporate environment. Resistance to technological change, particularly among traditional accounting firms, has been identified as a major barrier. This aligns with the findings of Bagherian et al. (2023), who argued that organizational commitment to digital transformation plays a crucial role in AI's successful integration into accounting systems. The study also indicates that organizations investing in AI training and awareness programs are more likely to experience smoother transitions and higher adoption rates. Similarly, Tandyano (2023) highlighted the importance of AI education in accounting curricula, recommending that universities and training institutions incorporate AI-focused courses to prepare future accountants for the digital era.

This research further supports the argument that AI can enhance regulatory compliance by automating the enforcement of financial reporting standards. AI-driven compliance monitoring systems help organizations adhere to financial regulations by flagging discrepancies and ensuring accuracy in financial disclosures. AI's ability to continuously monitor financial transactions for anomalies and compliance violations strengthens corporate governance and reduces the risk of financial misconduct. These findings reinforce previous research suggesting that AI's role in regulatory compliance will continue to expand as financial institutions increasingly rely on automated reporting mechanisms [33].

The transformative impact of AI on the accounting profession is evident in its ability to redefine accountants' roles. The study reveals that AI is shifting accountants' responsibilities from manual data processing toward strategic financial advisory roles. However, this shift requires accountants to acquire new skill sets, including data analytics and AI literacy. As highlighted by Tandiano (2023), accounting education must adapt to these evolving demands to ensure that professionals remain competitive in an AI-driven financial landscape [23].

Despite AI's numerous advantages, concerns about security and data privacy remain prevalent. This study identifies cybersecurity risks associated with AI-driven accounting systems, particularly regarding unauthorized access to sensitive financial data. Studies previously highlighted these concerns, emphasizing the need for robust data encryption, secure authentication protocols, and regulatory safeguards [1, 10-12, 34]. Organizations adopting AI-driven financial systems must prioritize cybersecurity measures to mitigate the risks of data breaches and financial fraud.

This study has certain limitations that should be acknowledged. First, the research primarily relies on qualitative data collected from expert interviews, which may introduce subjectivity in the interpretation of findings. Although theoretical saturation was reached, the perspectives of a broader sample of accounting professionals across different industries could provide a more comprehensive understanding of AI adoption. Second, the study focuses on AI-driven accounting practices within a specific organizational context, limiting the generalizability of findings to other industries or regions with varying technological infrastructures. Third, while the study identifies ethical and regulatory challenges, it does not extensively explore the long-term implications of AI's influence on job displacement and the future labor market in accounting.

Future research should explore the quantitative impact of AI on accounting efficiency, accuracy, and cost reduction through large-scale empirical studies. Longitudinal studies could provide insights into how AI adoption evolves over time and how organizations adapt to technological advancements. Additionally, research should investigate AI's implications for different sectors of accounting, such as forensic accounting, tax compliance, and governmental financial management. Future studies could also examine the role of AI in mitigating financial fraud across global markets, assessing the effectiveness of machine learning models in detecting and preventing fraudulent activities. Furthermore, research on AI-driven decision-making frameworks and accountability mechanisms would contribute to developing more ethical and transparent AI systems in accounting.

Organizations should prioritize AI training and skill development programs for accounting professionals to facilitate a smoother transition toward AI-integrated workflows. Investing in AI literacy and data analytics education will help accountants leverage AI's capabilities while adapting to evolving industry requirements. Additionally, companies should establish clear ethical guidelines and regulatory compliance frameworks to address the risks associated with AI in financial decision-making. Ensuring data security through robust encryption methods and cybersecurity protocols is essential to mitigate risks related to financial fraud and unauthorized access. Lastly, fostering a culture of innovation and technological adaptability within organizations will enhance

AI acceptance, enabling accountants to maximize the benefits of AI-driven financial systems while minimizing resistance to change.

### Authors' Contributions

Authors equally contributed to this article.

### Ethical Considerations

All procedures performed in this study were under the ethical standards.

### Acknowledgments

Authors thank all participants who participate in this study.

### Conflict of Interest

The authors report no conflict of interest.

### Funding/Financial Support

According to the authors, this article has no financial support.

### References

[1] O. A. Adelekan *et al.*, "Evolving tax compliance in the digital era: a comparative analysis of AI-driven models and blockchain technology in US tax administration," *Computer Science & IT Research Journal,* vol. 5, no. 2, pp. 311-335, 2024, doi: https://doi.org/10.51594/csitrj.v5i2.759.

[2] P. O. Odili, C. D. Daudu, A. Adefemi, I. O. Ekemezie, and G. S. Usiagu, "The impact of artificial intelligence on recruitment and selection processes in the oil and gas industry: a review," *Engineering Science & Technology Journal,* vol. 5, no. 2, pp. 612-638, 2024, doi: https://doi.org/10.51594/estj.v5i2.836.

[3] E. S. Okem, E. A. Ukpoju, A. B. David, and J. O. Olurin, "Advancing infrastructure in developing nations: a synthesis of AI integration strategies for smart pavement engineering," *Engineering Science & Technology Journal,* vol. 4, no. 6, pp. 533-554, 2023, doi: https://doi.org/10.51594/estj.v4i6.679.

[4] O. Olubusola, N. Z. Mhlongo, D. O. Daraojimba, and A. Olusola, "Machine learning in financial forecasting: A US review: Exploring the advancements, challenges, and implications of AI-driven predictions in financial markets," 2024.

[5] F. Osasona, O. O. Amoo, A. Atadoga, T. O. Abrahams, O. A. Farayola, and B. S. Ayinla, "Reviewing the ethical implications of AI in decision making processes," *International Journal of Management & Entrepreneurship Research,* vol. 6, no. 2, pp. 322-335, 2024, doi: https://doi.org/10.51594/ijmer.v6i2.773.

[6] B. S. Ayinla, O. O. Amoo, A. Atadoga, T. O. Abrahams, F. Osasona, and O. A. Farayola, "Ethical AI in practice: Balancing technological advancements with human values," *International Journal of Science and Research Archive,* vol. 11, no. 1, pp. 1311-1326, 2024, doi: https://doi.org/10.30574/ijsra.2024.11.1.0218.

[7] J. K. Nembe, J. O. Atadoga, B. O. Adelakun, O. Odeyemi, and B. B. Oguejiofor, "Legal implications of blockchain technology for tax compliance and financial regulation," *Finance & Accounting Research Journal,* vol. 6, no. 2, pp. 262-270, 2024, doi: https://doi.org/10.51594/farj.v6i2.824.

[8] J. K. Nembe *et al.*, "The role of artificial intelligence in enhancing tax compliance and financial regulation," *Finance & Accounting Research Journal,* vol. 6, no. 2, pp. 241-251, 2024, doi: https://doi.org/10.51594/farj.v6i2.822.

[9] S. L. Wamba-Taguimdje, S. Fosso Wamba, J. R. Kala Kamdjoug, and C. E. Tchatchouang Wanko, "Influence of artificial intelligence (AI) on firm performance: the business value of AI-based transformation projects," *Business Process Management Journal,* vol. 26, no. 7, pp. 1893-1924, 2020, doi: https://doi.org/10.1108/BPMJ-10-2019-0411.

[10] B. Odonkor, S. Kaggwa, P. Uwaoma, A. Hassan, and O. Farayola, "The impact of AI on accounting practices: A review: Exploring how artificial intelligence is transforming traditional accounting methods and financial reporting," *World Journal of Advanced Research and Reviews,* vol. 21, pp. 172-188, 2024, doi: https://doi.org/10.30574/wjarr.2024.21.1.2721.

[11] B. Odonkor, S. Kaggwa, P. U. Uwaoma, A. O. Hassan, and O. A. Farayola, "Integrating Artificial intelligence in accounting: a quantitative economic perspective for the future of US financial markets," *Finance & Accounting Research Journal,* vol. 6, no. 1, pp. 56-78, 2024, doi: https://doi.org/10.51594/farj.v6i1.723.

[12] B. Odonkor, S. Kaggwa, P. U. Uwaoma, A. O. Hassan, and O. A. Farayola, "The impact of AI on accounting practices: A review: Exploring how artificial intelligence is transforming traditional accounting methods and financial reporting," *World Journal of Advanced Research and Reviews,* vol. 21, pp. 172-188, 2024, doi: https://doi.org/10.30574/wjarr.2024.21.1.2721.

[13] T. O. Olorunsogo, A. Anyanwu, T. O. Abrahams, T. Olorunsogo, B. Ehimuan, and O. Reis, "Emerging technologies in public health campaigns: Artificial intelligence and big data," *International Journal of Science and Research Archive,* vol. 11, no. 1, pp. 478-487, 2024, doi: https://doi.org/10.30574/ijsra.2024.11.1.0060.

[14] A. Rahman, "AI revolution: shaping industries through artificial intelligence and machine learning," *Journal Environmental Sciences and Technology,* vol. 2, no. 1, pp. 93-105, 2023.

[15] M. Hassan, L. A. R. Aziz, and Y. Andriansyah, "The role of artificial intelligence in modern banking: an exploration of AI-driven approaches for enhanced fraud prevention, risk management, and regulatory compliance," *Reviews of Contemporary Business Analytics,* vol. 6, no. 1, pp. 110-132, 2023.

[16] N. Rane, "Role and challenges of ChatGPT and similar generative artificial intelligence in finance and accounting," *SSRN,* 2023. [Online]. Available: https://doi.org/10.2139/ssrn.4603206.

[17] A. O. Adewusi, O. F. Asuzu, T. Olorunsogo, C. Iwuanyanwu, E. Adaga, and D. O. Daraojimba, "AI in precision agriculture: A review of technologies for sustainable farming practices," 2024.

[18] A. O. Adewusi, U. I. Okoli, T. Olorunsogo, E. Adaga, D. O. Daraojimba, and O. C. Obi, "Artificial intelligence in cybersecurity: Protecting national infrastructure: A USA," 2024.

[19] A. Tiron-Tudor, A. N. Donțu, and V. P. Bresfelean, "Emerging technologies' contribution to the digital transformation in accountancy firms," *Electronics,* vol. 11, no. 22, p. 3818, 2022, doi: https://doi.org/10.3390/electronics11223818.

[20] N. Hussin, N. Bukhari, N. Hashim, S. Bahari, and M. Mohd Ali, "The Impact of Artificial Intelligence on Accounting Profession: A Concept Paper," *Business Management and Strategy,* vol. 15, p. 34, 2024, doi: https://doi.org/10.5296/bms.v15i1.21620.

[21] L. Layadi, "The Impact of Artificial Intelligence on Accounting and the Accountant Profession," *SSRN,* 2023, doi: https://doi.org/10.2139/ssrn.4516074.

[22] C. Marthen, "Impact of Artificial Intelligence (AI) Technology on Accounting," *SSRN,* 2023, doi: https://doi.org/10.2139/ssrn.4518019.

[23] R. Tandiono, "The Impact of Artificial Intelligence on Accounting Education: A Review of Literature," in *E3S Web of Conferences*, 2023, vol. 426, doi: https://doi.org/10.1051/e3sconf/202342602016.

[24] Y. Zhang, F. Xiong, Y. Xie, X. Fan, and H. Gu, "The impact of artificial intelligence and blockchain on the accounting profession," *IEEE Access,* vol. 8, pp. 110461-110477, 2020, doi: https://doi.org/10.1109/ACCESS.2020.3000505.

[25] S. Ebrahimi, S. Saeidi, and H. Fashangchi Benab, "Financial risk assessment based on artificial intelligence," in *Proceedings of the 7th International Conference on Management, Accounting, and Economics for Sustainable Development*, 2023: Mashhad. [Online]. Available: https://civilica.com/doc/2006112.

[26] A. Ashraf and F. Mahtari, "Application of artificial intelligence in accounting," in *Proceedings of the 11th International Conference on Interdisciplinary Research in Management, Accounting, and Economics in Iran*, 2023: Tehran. [Online]. Available: https://civilica.com/doc/1994619.

[27] M. Bagherian, P. Saadat, and M. Mosaeli, "The role of artificial intelligence and its importance in accounting systems," *Scientific Journal of New Research Approaches in Management and Accounting,* vol. 7, no. 24, pp. 713-727, 2023. [Online]. Available: https://majournal.ir/index.php/ma/article/view/1900.

[28] Y. Azar Saeed and S. Rostami, "Artificial intelligence and ethical decision-making in accounting and auditing: An analysis of related challenges," *Judgment and Decision Making in Accounting,* vol. 7, no. 2, pp. 87-114, 2023.

[29] A. Kord, "The impact of artificial intelligence application on project management performance," in *Proceedings of the 10th International Conference on Management, Economics, and Accounting*, 2023: Tehran. [Online]. Available: https://civilica.com/doc/1816647.

[30] P. Javanmiri, *Artificial intelligence in financial technology strategy for the future*. Century Economy Group, 2023.

[31] Z. Kazemi Saraskanroud and M. Safari, "Designing an artificial intelligence-based marketing process model: Application of a systematic review strategy," *Commercial Studies,* vol. 21, no. 123, pp. 109-126, 2023, doi: 10.22034/bs.2023.1999484.2765.

[32] I. Shah Nazari and M. Motamednia, "Opportunities and challenges of artificial intelligence in financial markets," *Financial Management,* vol. 4, no. 2, pp. 154-163, 2023.

[33] T. Vaqefi and Z. Dehaqin, "The application of artificial intelligence in accounting and auditing," in *Proceedings of the 5th National Conference on the Development of New Technologies in Management, Accounting, and Computer Science*, 2022: Tehran. [Online]. Available: https://civilica.com/doc/1554056.

[34] S. H. Krishna, M. Pattnaik, A. Patil, K. T. V. Rao, I. Muda, and S. Saravanan, "Artificial Intelligence Influence on Accounting Methods," in *2022 5th International Conference on Contemporary Computing and Informatics (IC3I)*, 2022: Uttar Pradesh, India, pp. 2120-2125, doi: https://doi.org/10.1109/IC3I56241.2022.10073067.

[35] P. Mohammadi and E. Tahmasbi, "The application of artificial intelligence in auditing: Advantages and challenges," *Management and Accounting in the Third Millennium,* vol. 28, pp. 149-160, 2024.