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ETHICAL BOUNDARIES OF ARTIFICIAL INTELLIGENCE USE IN THE ACCOUNTING PROFESSION: AN INTEGRATIVE REVIEW

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Abstract
Artificial intelligence (AI) is increasingly transforming accounting practice by extending automation beyond routine processing toward analytical, predictive, and knowledge-intensive activities. While these developments offer significant efficiency and decision-support benefits, they also raise important ethical and professional concerns related to reliability, transparency, bias, confidentiality, professional judgment, and accountability. This study conducts an integrative review of recent literature to examine how AI is currently applied within the accounting profession, identify the ethical and professional issues arising from its use, and determine the boundaries and safeguards required for responsible AI integration. Using a source-based Scopus search, 169 publication sources were identified and screened, resulting in 41 potentially relevant studies and 12 studies included in the final review. A bottom-up thematic synthesis identified five higher-order themes: task-dependent allocation of human and AI roles; reliability, verifiability, and traceability of AI-generated outputs; non-delegable professional judgment and accountability; data governance, confidentiality, fairness, and transparency; and preservation of professional competence and skepticism. The findings indicate that AI is more suitable for structured, repetitive, and independently verifiable tasks, while greater human involvement is required as tasks become more judgment-intensive and consequential. Based on these findings, the study proposes a three-zone ethical boundary consisting of delegable AI-supported tasks, controlled AI augmentation, and non-delegable professional responsibility. The study concludes that responsible AI use in accounting should be understood as accountable augmentation rather than unrestricted substitution, with the degree of AI autonomy decreasing as the need for professional judgment, contextual interpretation, verification, and accountability increases.
Keywords: *Artificial intelligence, Accounting profession, Professional ethics, Human-AI collaboration, Ethical boundaries.*

1. Introduction

Accounting practice has continuously evolved in response to technological and organizational change. The increasing use of digital technologies has shifted many accounting activities from predominantly manual and transaction-oriented processes toward more automated, data-driven, and analytical forms of work (Londoño-Cardozo, 2025). Digital transformation has also altered the composition of the accounting workforce, with technological change exerting stronger substitution effects on routine and entry-level work while increasing demand for technically skilled and highly educated employees (Chen et al., 2024). More recently, developments in artificial intelligence (AI) have accelerated this transformation by extending the use of technology beyond routine processing toward prediction, analysis, and decision support. Within accounting practice, technologies such as robotic process automation (RPA), machine learning (ML), and generative artificial intelligence (GenAI) are increasingly being applied to different types of accounting and auditing activities (Abbas et al., 2026).

AI applications can support accountants in performing routine and data-intensive activities as well as more knowledge-intensive tasks. RPA is used for activities such as document management, reconciliations, transaction processing, and compliance-related procedures, while analytical AI can support anomaly detection, risk assessment, forecasting, and financial analysis (Abbas et al., 2026). GenAI and large language models (LLMs) further extend these capabilities by supporting textual analysis, accounting-standard interpretation, document summarization, and the preparation of accounting-related outputs (Leitner-Hanetseder et al., 2026; van Zijl et al., 2026). These applications may improve efficiency and allow accountants to allocate more attention to analytical and judgment-intensive activities.

However, the increasing involvement of AI in accounting activities also creates important professional and ethical concerns. Empirical evidence shows that AI-generated accounting outputs may be inconsistent, contain false positives, or incorrectly apply accounting standards, meaning that apparently convincing outputs cannot automatically be regarded as reliable (Leitner-Hanetseder et al., 2026; van Zijl et al., 2026). AI adoption may also introduce concerns relating to algorithmic bias, objectivity, privacy, data confidentiality, transparency, accountability, trustworthiness, and excessive reliance on automated recommendations (Lehner et al., 2022; Alruwaili & Mgammal, 2025; Abbas, 2026). Such risks are particularly important in accounting because professional practice requires not only technical accuracy but also professional judgment, skepticism, accountability, and ethical responsibility.

The issue becomes more critical when AI is used to influence professional judgments and decisions. Sugahara and Kano (2026) show that GenAI-generated advice can influence ethical judgments in accounting contexts and that the opacity of AI-assisted judgment may create concerns regarding reliability and accountability. Similarly, Jaworska (2025) argues that AI systems cannot assume legal or moral responsibility for accounting decisions and therefore should not replace professional judgment in binding decisions. These findings suggest that the central issue is not simply whether accountants should use AI, but rather how far AI should be allowed to participate in accounting tasks without displacing human professional responsibility.

Although recent studies have examined AI adoption, performance, professional judgment, data governance, privacy, bias, and human oversight in accounting, these issues are often examined separately across different technologies and accounting activities. For example, Abbas (2026) identifies continuing research needs concerning explainability, privacy, confidentiality, bias, accountability, and human–AI collaboration, while Leitner-Hanetseder et al. (2026) specifically call for clearer frameworks to determine which accounting tasks can be reliably delegated to AI and how AI-generated outputs should be verified. This fragmentation leaves limited synthesis regarding where the ethical boundary should be drawn between acceptable AI assistance and inappropriate delegation of professional responsibility in accounting practice.

Accordingly, this study conducts an integrative review of recent literature to examine the use of AI within the accounting profession and to synthesize its associated ethical and professional implications. Specifically, the study examines how AI is applied across accounting activities, identifies the ethical and professional issues arising from its use, and determines the safeguards required for responsible AI adoption. Through the integration of these findings, the study develops a conceptual understanding of the ethical boundaries of AI use in accounting practice, particularly regarding the allocation of tasks between humans and AI, the verification of AI-generated outputs, professional judgment, and accountability.

2. Literature Review

Artificial intelligence (AI) refers to a system's ability to correctly interpret external data, learn from such data, and use those learnings to achieve specific goals and tasks through flexible adaptation (Kaplan & Haenlein, 2019). AI can utilize external information obtained from sources such as the Internet of Things (IoT) and big data to identify underlying rules and patterns through machine learning (ML), which broadly refers to methods that enable computers to learn without being explicitly programmed (Kaplan & Haenlein, 2019). By overcoming some of the computationally intensive, intellectual, and even creative limitations of humans, AI has opened new application domains across manufacturing, healthcare, finance, education, and marketing, with significant implications for productivity and performance (Dwivedi et al., 2021).

The development of AI has given rise to a range of technologies with different capabilities. Machine learning (ML) enables systems to learn patterns from problem-specific training data and automate analytical model building, while deep learning (DL) extends this capability through artificial neural networks with increasingly complex architectures (Janiesch et al., 2021). Natural

language processing (NLP), meanwhile, enables computers to process and analyze human language (Russell & Norvig, 2016). More recently, generative artificial intelligence (GenAI) has extended these capabilities by enabling systems to generate new content, including text, images, audio, and other forms of digital content based on patterns and structures learned from data (Feuerriegel et al., 2024). These developments have enabled AI applications ranging from prediction and anomaly detection to document analysis, computer vision, and large language models (LLMs) capable of generating, summarizing, and analyzing textual information (Feuerriegel et al., 2024).

Within the accounting profession, these technologies are increasingly being applied to both routine and knowledge-intensive activities. Machine learning, for example, can be used to analyze large volumes of financial data, identify patterns and anomalies, assess risks, and support transaction testing, while robotic process automation (RPA), which can be integrated with AI capabilities, facilitates the automation of repetitive and rule-based accounting processes (Abbas et al., 2026). More recently, GenAI and LLMs have expanded the technological capabilities available to accounting professionals by supporting activities involving the generation, summarization, and analysis of textual information (Abbas et al., 2026). Collectively, these developments suggest that the role of technology in accounting is shifting beyond the automation of routine processes to support increasingly analytical and knowledge-intensive tasks.

2.1 Professional Accounting Ethics and AI

Professional accounting practice is grounded in ethical responsibilities that extend beyond technical competence. The International Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants (IESBA) establishes five fundamental principles: integrity, objectivity, professional competence and due care, confidentiality, and professional behavior. These principles require professional accountants to act honestly, exercise judgment without inappropriate bias or influence, maintain sufficient professional knowledge and skill, protect confidential information, and comply with relevant laws and regulations while avoiding conduct that may discredit the profession (IESBA, 2024). The Code also provides a conceptual framework requiring professional accountants to identify, evaluate, and address threats to compliance with these fundamental principles.

The increasing use of artificial intelligence introduces new circumstances in which these ethical principles must be applied. AI-assisted accounting may influence the information used in professional judgments, the way accounting tasks are performed, and the extent to which professionals rely on technological outputs. Consequently, ethical considerations arise not only from the final outcome produced with AI but also from the processes through which data are obtained, AI-generated information is evaluated, professional judgments are formed, and responsibility for decisions is retained. These concerns are consistent with earlier research in auditing, which identified privacy, confidentiality, fairness, transparency, accountability, professional skepticism, and professional competence as ethical considerations arising from AI-assisted professional work (Munoko et al., 2020). Similarly, Lehner et al. (2022) identified objectivity, privacy, transparency, accountability, and trustworthiness as central ethical challenges associated with AI-based decision-making in accounting and auditing. This is particularly relevant because the 2024 edition of the IESBA Code incorporates technology-related provisions applicable to professional accountants, reflecting the increasing importance of technological competence and ethical judgment in technology-enabled professional activities (IESBA, 2024).

In this study, the IESBA fundamental principles are used as a normative foundation rather than predetermined analytical categories. Ethical issues are first identified inductively from the reviewed studies through bottom-up coding and thematic synthesis. The resulting themes are subsequently examined in relation to the fundamental principles of professional accounting ethics to assess how AI-related risks and safeguards interact with accountants' existing ethical responsibilities. This approach allows the ethical boundaries of AI use to emerge from contemporary accounting literature while remaining anchored in established professional

ethical standards.

3. Research Methods

3.1 Scoping and Problem Identification

Following the guidance for conducting integrative reviews proposed by Cronin and George (2023) and Whittemore and Knafl (2005), the review began with the identification of the research problem and the establishment of the scope of inquiry. A preliminary examination of the literature was conducted to develop an initial understanding of the growing application of artificial intelligence (AI) within the accounting profession and to identify issues requiring further synthesis. The initial scoping indicated that AI is increasingly being applied across various accounting activities while simultaneously raising ethical concerns related to professional judgment, accountability, transparency, data confidentiality, bias, and professional responsibility. Based on these observations, the review focused on examining the ethical implications associated with the use of AI in the accounting profession and identifying the boundaries necessary to ensure that its use remains consistent with professional and ethical responsibilities. This problem formulation informed the development of the following research questions:

RQ1. How is AI currently applied across different activities within the accounting profession?
RQ2. What ethical and professional issues arise from the use of AI in accounting practice?
RQ3. What ethical boundaries and safeguards can guide the responsible use of AI in the accounting profession?

These research questions subsequently guided the literature search, study selection, data extraction, and synthesis processes.

4. *Literature Search.*

To identify recent literature on the use of artificial intelligence (AI) in the accounting profession, a source-based search was conducted using Scopus. The search began by identifying publication sources associated with the subject areas of Artificial Intelligence and Accounting. This procedure resulted in 169 potentially relevant sources. These sources were subsequently examined individually to identify studies addressing the application of AI within accounting contexts.

The titles and abstracts of studies identified within these sources were screened for relevance to the scope of the review, particularly their focus on AI applications in accounting practice. This screening process resulted in 41 potentially relevant studies for further assessment.

The review was limited to studies published between 2025 and 2026 to capture recent developments in AI applications within the accounting profession. This period was selected to focus the review on contemporary evidence reflecting the rapid advancement and increasing integration of AI technologies into accounting practice. The year 2026 represents the year in which the literature search was conducted. Studies identified through these procedures were subsequently assessed according to the predefined eligibility criteria presented in Table 2.

Table 1. Scopus Search Strategy

Search Dimension	Selection
Database	Scopus
Search approach	Source-based search
Subject Areas	Artificial Intelligence; Accounting
Publication Period	2025-2026
Initial Sources Identified	169 sources

Source: Authors' own elaboration (2026).

4.1 Study Selection and Evaluation.

The initial source-based search in Scopus identified 169 publication sources associated with Artificial Intelligence and Accounting. These sources were examined individually to identify potentially relevant studies. The titles and abstracts of the identified studies were screened according to their relevance to AI applications in accounting, resulting in 41 studies for further assessment.

The full texts of these 41 studies were subsequently examined to determine their relevance to the objectives and research questions of the review and their compliance with the predefined eligibility criteria. Following the full-text assessment, 12 studies met the eligibility criteria and were included in the final review.

4.2 Data Extraction and Analysis.

To address the research questions, data were extracted from the 12 studies included in the final review. Following the principles of integrative review methodology, the extraction and analysis process aimed to synthesize findings across studies and develop higher-order themes from the existing literature (Cronin & George, 2023; Whittemore & Knafl, 2005).

The analysis initially followed a bottom-up approach, in which relevant information was extracted from each study without imposing predetermined thematic categories. Data extraction focused on the types and applications of AI in accounting practice, the accounting activities or tasks affected by AI, the benefits and risks associated with its use, ethical issues identified or discussed by the authors, and recommendations or safeguards proposed to address these concerns.

The extracted information was subsequently coded, and conceptually similar codes were compared and grouped into broader categories. Through an iterative process of comparison and refinement across the 12 studies, recurring patterns were identified and synthesized into higher-order themes representing the major ethical issues associated with AI use in the accounting profession. These themes were then examined in relation to established principles of professional accounting ethics to develop a conceptual understanding of the ethical boundaries of AI use in accounting practice. The resulting thematic structure provided the basis for organizing and interpreting the findings presented in the subsequent sections.

Table 2
Eligibility Criteria for Study Selection

Criteria	Criteria Details
IC 1	The study should be a peer-reviewed publication in a journal or conference proceeding.
IC 2	The study should be published in English.
IC 3	The study should be published between 2025 and 2026.
IC 4	The study should examine the use or application of AI within an accounting context.
IC 5	The study should provide evidence or discussion relevant to the ethical, professional, risk, governance, accountability, or responsible-use implications of AI in accounting.

Source: Authors' own elaboration (2026).

5. Research Findings and Discussion

5.1 Thematic Synthesis of the Reviewed Studies

The analysis of the 12 included studies revealed that the ethical implications of artificial intelligence in accounting cannot be understood solely in terms of whether AI is used or not. Rather, the findings indicate that the ethical significance of AI use depends on the nature of the accounting task, the reliability and traceability of AI-generated outputs, the degree of human involvement, the governance of data and technological systems, and the extent to which professional responsibility remains with the accountant. Through bottom-up coding and iterative comparison, five higher-order themes emerged: (1) task-dependent allocation of human and AI roles, (2) reliability, verifiability, and traceability of AI-generated outputs, (3)

non-delegable professional judgment and accountability, (4) data governance, confidentiality, fairness, and transparency, and (5) preservation of professional competence and skepticism.

Table 3
Higher-Order Themes and Central Ethical Issues in AI Use within the Accounting Profession

Higher-order theme	Central Issue	Primary relevance
Task-dependent allocation of human and AI roles	Different accounting tasks permit different levels of AI involvement	RQ1, RQ3
Reliability, verifiability, and traceability	AI outputs cannot be assumed to be accurate merely because they are plausible	RQ2, RQ3
Non-delegable professional judgment and accountability	AI may assist decisions, but responsibility remains with human professionals	RQ2, RQ3
Data governance, confidentiality, fairness, and transparency	Responsible AI use depends on the quality, security, transparency, and fairness of data and systems	RQ2, RQ3
Preservation of professional competence and skepticism	Excessive reliance may weaken the skills required to evaluate AI itself	RQ2, RQ3

Source: Authors' own elaboration (2026).

5.2 RQ1: How Is AI Currently Applied Across Different Activities Within the Accounting Profession?

The reviewed studies demonstrate that AI applications in accounting extend across a continuum from routine automation to analytical support and increasingly to knowledge-intensive activities. RPA is commonly applied to structured and repetitive processes, including invoice processing, reconciliations, audit documentation, transaction processing, sampling procedures, bookkeeping, and compliance-related activities. Analytical AI and machine learning extend these applications to transaction scoring, anomaly detection, risk assessment, full-population testing, financial forecasting, scenario analysis, and decision support. GenAI and LLMs further expand AI involvement into contract summarization, working-paper drafting, retrieval of methodological guidance, document analysis, and other text-intensive accounting activities (Abbas et al., 2026).

A similar development is evident within Accounting Information Systems. Attia et al. (2026) describe the integration of ML, RPA, and NLP into AIS to automate routine processes, improve classification, support financial reporting, detect anomalous transactions, forecast risks, and provide real-time information for managerial decision-making. This indicates that AI-enabled AIS is evolving from a transaction-processing function toward an analytical and decision-support function.

Evidence from actual accounting workflows further indicates that GenAI is currently concentrated more heavily in routine and text-intensive activities than in activities whose value derives primarily from professional judgment. Choi and Xie (2026), for example, find GenAI use in data entry, administrative work, and business communication, while its use is less frequent in complex quality assurance and advisory activities. Their field evidence also suggests that GenAI adoption reallocates accountants' time away from routine data entry toward communication and quality assurance activities.

The distinction between procedural and judgment-intensive tasks is also evident in experimental evidence. Van Zijl et al. (2026) find that AI models perform relatively well in

journal entries and basic calculations but perform substantially worse when required to critique accounting treatments, distinguish correct from incorrect information, and exercise judgment. This supports the broader observation that AI is currently more capable of automating or augmenting tasks with relatively clear rules than independently performing tasks requiring contextual interpretation, skepticism, and integrated professional judgment.

Overall, RQ1 shows that AI use in accounting follows three broad forms: automation of structured tasks, augmentation of analytical processes, and support for knowledge-intensive or judgment-related activities. However, the literature does not support treating these three forms as ethically equivalent. As AI moves from routine processing toward activities involving interpretation and professional judgment, the need for human involvement becomes progressively more important.

5.3 RQ2: What Ethical and Professional Issues Arise from the Use of AI in Accounting Practice?

The first recurring issue concerns the reliability of AI-generated outputs. The reviewed studies consistently demonstrate that AI capability does not guarantee dependable accounting output. Leitner-Hanetseder et al. (2026) find substantial variation in ChatGPT performance according to model version, task type, and accounting standard. Although accuracy reached up to 77% under some conditions, false-positive responses created a risk of misleading users into believing that an incorrect answer was reliable. Van Zijl et al. (2026) similarly report instances in which LLMs incorrectly applied IFRS principles while presenting their responses confidently, and find that none of the models approached human performance when critiquing accounting treatments.

This reliability problem creates a related ethical issue of overreliance and automation bias. Choi and Xie (2026) show that although AI assistance improved transaction-classification accuracy, some participants continued to follow AI recommendations even when the recommendation differed from the decision they would otherwise have made. More experienced accountants were better able to interpret confidence signals and intervene when AI uncertainty was high, whereas less experienced accountants were more likely either to rely excessively on uncertain recommendations or fail to use available AI information effectively.

Sugahara and Kano (2026) provide additional evidence that AI influence extends beyond technical accuracy into ethical judgment. Their experiment shows that advice provided by GenAI can influence accounting-related moral judgments in a manner comparable to advice from human auditors. Individuals who perceived GenAI advice as highly credible were particularly susceptible to its influence, demonstrating the importance of algorithm appreciation and perceived algorithmic authority. Thus, even technically advisory AI can become ethically significant when users assign authority to its recommendations.

A second recurring issue concerns explainability, transparency, and traceability. Attia et al. (2026) identify the black-box characteristics of complex AI systems as a concern because users may be unable to understand how financial recommendations or classifications are generated. Excessive dependence on these outputs may consequently undermine professional judgment. Lehner (2026) develops this concern further by arguing that the increased use of model outputs, risk scores, and algorithmic thresholds can alter the epistemic basis of accounting and auditing, potentially shifting reliance away from traceable evidence and contextual professional judgment toward technical model performance.

A third group of concerns relates to data governance, privacy, confidentiality, and bias. Abbas (2026) identifies privacy, confidentiality, data security, misuse, poor data quality, algorithmic bias, and cybersecurity among the significant risks associated with AI in management accounting. The review also identifies deskilling and lack of expertise in advanced data analytics as professional risks. Alruwaili and Mgammal (2025) similarly highlight privacy concerns, bias in training data, regulatory gaps, cybersecurity risks, workforce displacement,

and the need for ethical governance and professional training.

The importance of data governance is reinforced empirically by Bin-Nashwan et al. (2025). Their results show that AI adoption was positively associated with financial reporting accuracy and auditing efficiency and negatively associated with information asymmetry. Importantly, big-data governance significantly strengthened these relationships, demonstrating that the benefits of AI depend partly on the quality, integrity, security, and regulatory compliance of the underlying data.

The final recurring professional issue is deskilling and the erosion of professional competence. Automation can remove repetitive work and free accountants for higher-value activities, but the literature also warns that the removal of foundational tasks may reduce opportunities for professionals to develop the knowledge required to evaluate more sophisticated AI outputs. Abbas (2026) identifies deskilling, reskilling, and changes in professional identity as consequences of technological transformation, while Londoño-Cardozo (2025) stresses that accountants remain necessary to interpret and validate AI-generated information, ensure compliance, and exercise professional judgment.

Taken together, RQ2 indicates that the ethical challenge of AI in accounting is not reducible to technological error. The principal concerns arise from the interaction between technological limitations and professional behavior: inaccurate outputs may be accepted without verification; opaque recommendations may receive undue authority; sensitive or biased data may be processed without appropriate safeguards; and automation may weaken the competence necessary to supervise AI effectively.

5.4 RQ3: What Ethical Boundaries and Safeguards Can Guide the Responsible Use of AI in the Accounting Profession?

The synthesis of the reviewed studies suggests that the ethical boundary of AI use should be determined primarily by the nature and professional consequence of the task, rather than simply by the type of AI technology being used. The same AI system may be acceptable for summarizing a contract or preparing an initial classification while being inappropriate as the sole basis for a material accounting judgment or binding professional decision.

Evidence for this distinction is particularly clear in Jaworska (2025), who argues that AI systems lack legal personality and cannot assume the legal or moral responsibility attached to financial reporting decisions. The study therefore concludes that binding accounting decisions should not be delegated autonomously to AI. Instead, AI should complement expert evaluation, with input accuracy and outputs subjected to verification, internal controls, compliance analysis, and professional review.

Leitner-Hanetseder et al. (2026) similarly call for clear frameworks distinguishing tasks that can reliably be delegated to AI from those requiring professional intervention. Their recommendations emphasize authoritative source references, traceability, verification against accounting standards and regulation, and maintenance of professional judgment. Sugahara and Kano (2026) add the need for documentation of GenAI use and professional or regulatory guidance where AI contributes to accounting judgments.

Based on these recurring patterns, the synthesis supports a three-zone ethical boundary for AI use in accounting.

5.4.1 Zone 1: Delegable AI-supported tasks. AI may perform a relatively high proportion of work where tasks are structured, repetitive, rule-based, and independently verifiable. Examples include initial transaction processing, reconciliations, document classification, data extraction, anomaly screening, and routine administrative work. Human involvement remains necessary through appropriate controls, but continuous case-by-case professional judgment is less critical.

5.4.2 Zone 2: Controlled AI augmentation. AI may provide analysis, recommendations, forecasts, summaries, or preliminary judgments when tasks involve interpretation or moderate professional judgment. However, outputs should not become final conclusions without human verification. Safeguards should include source verification, documentation of AI use, review of assumptions and confidence levels, consideration of alternative evidence, data governance, and a clearly identifiable professional reviewer.

5.4.3 Zone 3: Non-delegable professional responsibility. AI should not autonomously determine matters requiring binding professional judgment, ethical evaluation, final accountability, or responsibility to stakeholders and the public interest. Final decisions involving material accounting treatment, audit conclusions, professional sign-off, ethical dilemmas, or other high-consequence judgments must remain under meaningful human control.

This three-zone structure represents a synthesis of the reviewed evidence rather than a classification taken from any individual study. It reconciles findings showing substantial benefits from automation with evidence showing declining reliability as accounting tasks become more judgment-intensive. It also reflects the empirical observation that professional experience enhances effective human-AI collaboration: experienced accountants intervene more effectively when AI uncertainty is high.

Across all three zones, the reviewed literature identifies several cross-cutting safeguards: human oversight, verification and traceability, appropriate data governance, documentation of AI use, protection of confidential information, bias and quality controls, professional training, and clear organizational or regulatory accountability. Nashwan et al. (2025) demonstrate the importance of data-quality and compliance governance, Jaworska (2025) emphasizes internal verification and human responsibility, and Abbas et al. (2026) stress AI literacy, regulatory frameworks, and capability development.

6. Discussion

The findings of this integrative review suggest that the central ethical question surrounding AI in accounting is not whether AI should be permitted, but how professional responsibility should be allocated when AI participates in accounting work. This distinction is important because the reviewed studies consistently show that AI can simultaneously improve efficiency and create new forms of professional risk. The ethical boundary therefore cannot be represented as a binary distinction between AI use and non-use.

6.1 Ethical Boundaries Are Task-Dependent Rather Than Technology-Dependent

One of the clearest findings from the synthesis is that task characteristics matter more than technology labels. RPA, ML, or GenAI cannot be classified as inherently acceptable or unacceptable for accounting purposes. Instead, ethical acceptability changes according to whether a task is structured, verifiable, judgment-intensive, and consequential.

This interpretation is strongly supported by the contrast between AI performance in procedural and evaluative accounting tasks. Van Zijl et al. (2026) find comparatively strong performance in journal entries but substantially weaker performance when models must critique accounting treatments and distinguish correct information from incorrect information. Likewise, Leitner-Hanetseder et al. (2026) show that output reliability varies according to task category, model, and accounting standard, demonstrating that a model capable of performing one accounting task cannot automatically be presumed competent in another.

This provides the rationale for the proposed three-zone framework. The permissible degree of AI autonomy should decrease as the level of professional judgment, uncertainty, and

accountability associated with a task increases. AI may therefore move from performing work in Zone 1, to assisting professionals in Zone 2, but should not become the responsible decision-maker in Zone 3.

6.2 Human Oversight Must Be Substantive, Not Merely Formal

The findings also qualify the commonly proposed solution of maintaining a "human in the loop." Simply having a professional nominally involved does not necessarily provide effective oversight. Choi and Xie (2026) demonstrate that professional experience affects how accountants interact with AI uncertainty. Experienced accountants were more likely to intervene when AI confidence was low, whereas less experienced accountants displayed weaker responses to uncertainty.

This implies that meaningful human oversight requires competence to challenge AI, not merely the formal presence of a human reviewer. The finding is particularly relevant to the IESBA principle of professional competence and due care established in the normative foundation of this study. Accountants must not only possess professional knowledge but also maintain competence as technologies change.

Consequently, the ethical use of AI creates what may be described as a verification paradox: the greater the profession relies on AI to perform accounting work, the more important it becomes that accountants retain sufficient independent expertise to detect when AI is wrong. If automation weakens that expertise through deskilling, human oversight may remain formally present but become substantively ineffective.

6.3 Mapping the Emergent Themes to Professional Accounting Ethics

When the inductively derived themes are examined against the IESBA ethical foundation, strong conceptual relationships emerge.

Integrity is implicated by the need to ensure that AI-generated information is not presented as reliable without appropriate verification. Confidently generated but incorrect accounting treatments or fabricated interpretations of standards create a risk that inaccurate information enters professional work unless accountants challenge it.

Objectivity is particularly relevant to algorithmic bias, automation bias, and algorithmic authority. Sugahara and Kano (2026) show that perceived credibility can cause AI advice to influence ethical judgment similarly to human professional advice. Objectivity therefore requires accountants to evaluate AI recommendations critically rather than treating algorithmic origin as evidence of neutrality.

Professional competence and due care is the most pervasive principle across the findings. Accountants must understand AI capabilities and limitations, verify outputs, identify circumstances in which AI is unreliable, and retain sufficient accounting competence to override technological recommendations. Continuous AI literacy and professional development are therefore ethical safeguards rather than merely employability skills.

Confidentiality directly connects with the repeated concerns regarding privacy, cybersecurity, sensitive accounting information, and the data used to train or operate AI systems. Abbas (2026) and Alruwaili and Mgammal (2025) both identify privacy, confidentiality, security, and data-protection risks as material concerns.

Professional behavior requires that AI use remain consistent with laws, regulations, standards, and the wider responsibilities associated with the accounting profession. This principle becomes particularly important where professionals might otherwise attempt to transfer responsibility to an AI system. Jaworska (2025) shows that AI cannot assume legal or moral responsibility, supporting the conclusion that accountability remains fundamentally

human.

The mapping therefore shows that AI does not create an entirely separate category of professional ethics. Rather, AI changes the circumstances under which existing ethical obligations must be exercised.

6.4 From Human-AI Substitution to Accountable Augmentation

Taken together, the evidence favors accountable augmentation rather than unrestricted substitution as the appropriate model for AI integration in accounting. This does not imply that accountants must manually repeat every operation performed by AI. Such an approach would eliminate much of the efficiency that motivates AI adoption. Instead, the appropriate degree of human intervention should reflect the risk and professional consequence of the underlying task.

For structured activities, automation can legitimately substitute substantial amounts of human processing. For analytical activities, AI can extend human capabilities by processing information, identifying patterns, generating alternatives, and highlighting anomalies. For judgment-intensive activities, however, AI should provide inputs to professional reasoning rather than replace that reasoning.

This interpretation is consistent with real-world evidence from Choi and Xie (2026), who find that AI and professional expertise can be complementary and that GenAI adoption reallocates work from routine data entry toward quality assurance and other judgment-intensive activities. It is also consistent with Londoño-Cardozo (2025), who emphasizes that accountants remain responsible for interpreting and validating technological outputs and applying professional judgment.

The distinction is important because it moves the debate beyond predictions of whether AI will "replace accountants." The more relevant professional question is which components of accounting work can appropriately be delegated while preserving the human capacities on which professional trust depends.

6.5 The Conceptual Ethical Boundary of AI Use in Accounting

The integrated findings therefore support a conceptual principle that can summarize the ethical boundary identified in this review:

The ethical acceptability of AI use decreases as the professional consequences of the task, the need for contextual judgment, and the difficulty of independently verifying the output increase; conversely, the required degree of meaningful human oversight and accountability increases.

Under this principle, efficiency alone is insufficient to justify greater AI autonomy. A system may be technically capable of producing a recommendation while still being unsuitable for autonomous professional use because its reasoning is not sufficiently verifiable, its data are not appropriately governed, its output may be biased or unstable, or the resulting decision carries responsibilities that cannot be delegated.

This produces the central contribution of the review. The boundary between ethical and unethical AI use in accounting is not defined by the presence of AI itself but by whether AI use preserves professional accountability. AI use remains ethically defensible when it augments accountants' capabilities while maintaining verification, competence, confidentiality, objectivity, transparency, and human responsibility. It becomes increasingly problematic when technological output replaces independent professional evaluation, obscures the basis of judgment, compromises protected data, or enables professionals to distance themselves from decisions for which they remain responsible.

7. Conclusion

This integrative review examined the current applications of artificial intelligence in the accounting profession, the ethical and professional issues arising from its use, and the boundaries and safeguards required for responsible AI integration. The synthesis of 12 studies shows that AI is increasingly applied across a broad range of accounting activities, including transaction processing, reconciliations, anomaly detection, risk assessment, forecasting, financial reporting, audit procedures, document analysis, and decision support. However, the extent to which AI can appropriately participate in these activities varies according to the nature of the task. AI appears particularly suitable for structured, repetitive, and independently verifiable activities, whereas its limitations become more significant when accounting tasks require contextual interpretation, professional skepticism, ethical judgment, and accountability.

The review identified five major ethical and professional themes: task-dependent allocation of human and AI roles; reliability, verifiability, and traceability of AI-generated outputs; non-delegable professional judgment and accountability; data governance, confidentiality, fairness, and transparency; and the preservation of professional competence and skepticism. These findings indicate that the ethical risks of AI use extend beyond technological errors. They also arise from the way professionals interact with AI, particularly when inaccurate or opaque outputs are accepted without sufficient verification, algorithmic recommendations receive excessive authority, sensitive or biased data are inadequately governed, or automation reduces the professional competence required to evaluate AI-generated information.

Based on these findings, this study proposes a three-zone ethical boundary for AI use in accounting. In the first zone, AI may assume a relatively greater role in structured and verifiable tasks. In the second zone, AI may support analytical and interpretive activities, but its outputs should remain subject to meaningful professional verification and oversight. In the third zone, activities involving binding professional judgment, ethical responsibility, final accountability, or high-consequence decisions should remain under human control. Across these zones, responsible AI use requires safeguards including human oversight, verification and traceability, appropriate data governance, documentation of AI use, confidentiality protection, bias and quality controls, professional training, and clear accountability.

When interpreted in relation to the IESBA fundamental principles, the findings further suggest that AI does not create a separate system of professional ethics. Instead, AI changes the circumstances in which existing ethical responsibilities must be exercised. Integrity requires professionals to verify AI-generated information before relying on it; objectivity requires critical evaluation of algorithmic influence and bias; professional competence and due care require accountants to understand AI capabilities and limitations; confidentiality requires appropriate protection of sensitive information; and professional behavior requires continued compliance with professional, legal, and regulatory responsibilities.

Overall, the central conclusion of this review is that the appropriate degree of AI autonomy should decrease as the need for professional judgment, contextual interpretation, verification, and accountability increases. Accordingly, responsible AI integration in accounting should be understood as a form of accountable augmentation rather than unrestricted substitution. The ethical boundary is therefore not determined simply by whether AI is used, but by whether its use preserves professional judgment, meaningful human oversight, and accountability for the resulting accounting decisions.

8. Limitations and Future Research

This study is subject to several limitations. First, the review is based on 12 studies, which provides a focused synthesis of recent evidence but limits the breadth of the literature represented. The relatively small number of included studies reflects the predefined eligibility criteria and the contemporary focus of the review. Consequently, the themes and ethical boundaries proposed in this study should be interpreted as a synthesis of emerging evidence rather than as an exhaustive

representation of all research concerning AI and the accounting profession.

Second, the review was deliberately restricted to studies published between 2025 and 2026 in order to capture contemporary developments in AI applications in accounting. While this narrow period increases the relevance of the evidence to current technologies, it excludes earlier research that may provide additional theoretical, historical, or empirical perspectives on automation, machine learning, algorithmic decision-making, and professional ethics in accounting.

Third, the literature search relied exclusively on a source-based search using Scopus. Although Scopus provides broad coverage of peer-reviewed scholarly publications, relevant studies indexed in other academic databases or published in sources not captured through the selected search approach may have been omitted. The inclusion of only English-language peer-reviewed journal articles and conference proceedings further limits the review by excluding potentially relevant research published in other languages or publication formats.

Fourth, the integrative nature of the review means that the included studies differ in their methodological approaches, accounting contexts, AI technologies, and units of analysis. Some studies examine actual professional practice, whereas others use experimental, conceptual, or review-based approaches. Therefore, the evidence underlying the identified themes does not have the same empirical weight across all studies. The proposed three-zone framework should consequently be viewed as a conceptual synthesis requiring further empirical validation, rather than as a formally tested decision model.

Finally, AI technologies are developing rapidly, meaning that the capabilities and limitations identified in studies published during 2025-2026 may change as models, organizational practices, and regulatory frameworks evolve. Future research should therefore test the proposed ethical boundary framework across different accounting domains, professional settings, jurisdictions, and AI systems. In particular, empirical research is needed to examine how the three proposed zones operate in actual accounting decisions, how the degree of required human oversight can be measured, and whether different levels of AI autonomy affect professional judgment, reporting quality, accountability, and compliance with professional ethical principles.

References

Abbas, K. (2026). Management accounting and artificial intelligence: A comprehensive literature review and recommendations for future research. *The British Accounting Review, 58*(2), 101551. https://doi.org/10.1016/j.bar.2025.101551

Abbas, K., De Santis, F., & Kolbjørnsrud, V. (2026). Artificial intelligence in accounting: A comparative analysis of adoption in accounting and non-accounting firms. *Journal of Accounting and Public Policy*, *57*, 107433. https://doi.org/10.1016/j.jaccpubpol.2026.107433

Alruwaili, T. F., & Mgammal, M. H. (2025). The impact of artificial intelligence on accounting practices: An academic perspective. *Humanities and Social Sciences Communications*, *12*, 1197. https://doi.org/10.1057/s41599-025-05004-6

Attia, E. F., Bamhraz, A., Binsaddig, R., & Sibai Qotb, A. (2026). Artificial intelligence adoption in accounting information systems: Empirical evidence on performance effects in Saudi Arabia. *Journal of Business and Socio-economic Development*, *6*(4), 413–429. https://doi.org/10.1108/JBSED-02-2026-0152

Bin-Nashwan, S. A., Li, J. Z., Jiang, H., Bajary, A. R., & Ma'aji, M. M. (2025). Does AI adoption redefine financial reporting accuracy, auditing efficiency, and information asymmetry? An integrated model of TOE-TAM-RDT and big data governance. *Computers in Human Behavior Reports*, *17*, 100572. https://doi.org/10.1016/j.chbr.2024.100572

Chen, Y., Lu, C., & Li, Z. (2024). How does digital transformation affect corporate accounting employees? *China Journal of Accounting Research*, *17*, 100391. https://doi.org/10.1016/j.cjar.2024.100391

Choi, J. H., & Xie, C. L. (2026). Human + AI in accounting: Early evidence from the field. *Journal of Accounting Research*, *64*(3), 1333–1373. https://doi.org/10.1111/1475-679X.70052

Cronin, M. A., & George, E. (2023). The why and how of the integrative review. *Organizational Research Methods*, *26*(1), 168–192. https://doi.org/10.1177/1094428120935507

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P. V., Janssen, M., Jones, P., Kar, A. K., Kizgin, H., Kronemann, B., Lal, B., Lucini, B., … Williams, M. D. (2021). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, *57*, 101994. https://doi.org/10.1016/j.ijinfomgt.2019.08.002

Feuerriegel, S., Hartmann, J., Janiesch, C., & Zschech, P. (2024). Generative AI. *Business & Information Systems Engineering*, *66*(1), 111–126. https://doi.org/10.1007/s12599-023-00834-7

International Ethics Standards Board for Accountants. (2024). *2024 handbook of the International Code of Ethics for Professional Accountants: Including International Independence Standards*. International Federation of Accountants.

Janiesch, C., Zschech, P., & Heinrich, K. (2021). Machine learning and deep learning. *Electronic Markets*, *31*, 685–695. https://doi.org/10.1007/s12525-021-00475-2

Jaworska, M. (2025). The limits of autonomy of AI systems in accounting. *Procedia Computer Science*, *270*, 2695–2704. https://doi.org/10.1016/j.procs.2025.09.391

Kaplan, A. M., & Haenlein, M. (2019). Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business Horizons*, *62*(1), 15–25. https://doi.org/10.1016/j.bushor.2018.08.004

Lehner, O. M. (2026). AI and the production of truth in accounting practices: A Foucauldian analysis. *Critical Perspectives on Accounting*, *103*, 102862. https://doi.org/10.1016/j.cpa.2026.102862

Lehner, O. M., Ittonen, K., Silvola, H., Ström, E., & Wuhrleitner, A. (2022). Artificial intelligence based decision-making in accounting and auditing: Ethical challenges and normative thinking. *Accounting, Auditing & Accountability Journal*, *35*(9), 109–135. https://doi.org/10.1108/AAAJ-09-2020-4934

Leitner-Hanetseder, S., Perkhofer, L., Frenkenberger, S., & Eisl, C. (2026). ChatGPT as digital accounting assistant: Evaluating output performance in financial accounting tasks. *International Journal of Accounting & Information Management*, *34*(2), 330–361. https://doi.org/10.1108/IJAIM-01-2025-0017

Londoño-Cardozo, J. (2025). The evolution of accounting practice in the age of artificial intelligence: Challenges and opportunities for higher education in public accounting. *Cuadernos de Administración*, *41*(81), e30113755. https://doi.org/10.25100/cdea.v41i81.13755

Munoko, I., Brown-Liburd, H. L., & Vasarhelyi, M. (2020). The ethical implications of using artificial intelligence in auditing. *Journal of Business Ethics*, *167*(2), 209–234. https://doi.org/10.1007/s10551-019-04407-1

Russell, S. J., & Norvig, P. (2016). *Artificial intelligence: A modern approach* (3rd ed., Global ed.). Pearson.

Sugahara, S., & Kano, K. (2026). The impact of ChatGPT's advice on professional judgment related with accounting and the role of accounting education. *Journal of Business Ethics*. Advance online publication. https://doi.org/10.1007/s10551-026-06365-x

van Zijl, W., Burnham, K., & Ecim, D. (2026). How close is AI to replacing accounting consultants? Insights from a comparative study of multiple AI models and exit-level accounting students. *Meditari Accountancy Research*, *34*(7), 53–78. https://doi.org/10.1108/MEDAR-07-2025-3160

Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology. *Journal of Advanced Nursing*, *52*(5), 546–553. https://doi.org/10.1111/j.1365-2648.2005.03621.x