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ARTIFICIAL INTELLIGENCE AND AUDIT QUALITY: AN EMPIRICAL LITERATURE REVIEW FROM SCOPUS DATABASE

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Abstract: This study aims to explore the development and influence of Artificial Intelligence (AI) on audit quality through a comprehensive empirical literature review. Utilizing a qualitative research approach, the study systematically analyzes 325 peer-reviewed articles published in Scopus-indexed journals between 2010 and 2025. The selection was based on the keyword "Artificial Intelligence on Audit Quality" and focused exclusively on finalized, English-language scientific journal articles. The findings reveal a significant rise in scholarly interest in AI applications in auditing, particularly over the past five years, with AI being applied to enhance fraud detection, real-time data analysis, and risk assessment. However, the results also highlight substantial gaps, including limited auditor readiness, ethical and regulatory concerns, and uneven research distribution across regions and institutions. The conclusions emphasize that while AI holds transformative potential for auditing, its optimal impact requires integration with human expertise, ethical frameworks, and regulatory oversight. The study's implications suggest that future research should prioritize explainable AI, interdisciplinary collaboration, and broader global participation to ensure equitable and effective adoption. Overall, this review provides critical insights for researchers, practitioners, and policymakers on aligning AI innovations with the strategic and ethical demands of modern auditing to improve audit quality and public trust in financial reporting.

Keywords: Artificial Intelligence, Audit Quality, Digital Auditing, Machine Learning, Ethical Governance

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INTRODUCTION

The rapid integration of Artificial Intelligence (AI) into professional and technical domains has ignited widespread academic interest, particularly in its application to auditing. As businesses undergo digital transformation, the audit profession is increasingly reliant on AI-driven tools to enhance audit quality and efficiency (Sun & Vasarhelyi, 2018). Audit quality defined as the ability of the audit to detect and report material misstatements remains a cornerstone of financial trust and transparency. The role of AI in reshaping audit procedures, improving risk assessments, and augmenting decision-making processes is progressively being recognized across scholarly work (Abu Huson et al., 2024; Alhazmi et al., 2025).

This literature review aims to systematically examine empirical studies retrieved from the Scopus database that investigate the intersection between AI and audit quality. The research seeks to explore not only the technical advancements and methodologies employed but also the implications and effectiveness of AI applications within auditing practices. The transformation of audit methods through technologies such as machine learning, natural language processing, and predictive analytics has introduced opportunities for enhanced fraud detection, audit planning, and compliance monitoring (Chen & Yang, 2024; Hamdan & Al Habashneh, 2024). However, there is still a knowledge gap regarding how these technologies translate to measurable improvements in audit quality.

The conceptual foundation for AI in auditing stems from earlier technological integrations such as computer-assisted audit techniques (CAATs). Over time, these tools evolved into sophisticated AI systems capable of analyzing large datasets and identifying anomalies more efficiently than human auditors (Hu et al., 2021). With increasing complexity in financial reporting and regulatory requirements, AI systems offer a scalable solution for managing voluminous and heterogeneous data sources (Khan et al., 2024). For instance, machine learning algorithms can predict audit risks based on historical data, while natural language processing can review contracts or disclosures for compliance issues (Rahman & Ziru, 2023).

Ren & Chen (2021) provided early insight into how AI models can simulate human judgment in auditing tasks. More recent studies, such as those by Singh et al. (2025) and Sinha et al. (2025), have demonstrated how AI tools assist in fraud detection by recognizing patterns that deviate from normative financial behavior. This shift from traditional to data-driven auditing represents not just a change in tools but a transformation in audit philosophy and approach.

The empirical literature on AI's impact on audit quality is diverse, encompassing both quantitative and qualitative methodologies. Studies like those by Estep et al. (2024) and Melnychenko (2019) have used statistical models to compare audit outcomes before and after the implementation of AI technologies. Their findings suggest that firms adopting AI tools tend to report fewer restatements and exhibit higher investor confidence. Similarly, Noordin et al. (2022) observed that AI-assisted audits resulted in more timely and accurate financial reporting among publicly traded firms in emerging markets.

Nevertheless, not all findings are uniformly positive. While many studies report improvements in detection efficiency, concerns persist regarding overreliance on algorithmic outputs and the interpretability of AI decisions (Nelson et al., 2000). The 'black box' nature of some machine learning models poses a challenge for audit transparency and accountability. Moreover, auditors must be adequately trained to critically assess AI-generated insights rather than blindly trusting the outputs (Muter et al., 2024).

A closer look at the studies reveals several recurring themes. First is the increasing use of neural networks and deep learning models to support decision-making in audit procedures (Lam et al., 2024; Tarnate et al., 2020). Second, predictive analytics is commonly employed to identify audit risk factors and classify transactions (Puthukulam et al., 2021). Third, real-time data analysis and continuous auditing have emerged as key areas where AI significantly contributes to audit quality (Benhayoun et al., 2025).

Alhazmi et al. (2025) emphasized the role of explainable AI (XAI) in addressing auditor skepticism, highlighting tools that allow for transparent reasoning behind automated judgments. Similarly, Ashraf (2025) introduced hybrid frameworks combining human expertise with machine intelligence, underlining a future where AI augments rather than replaces auditors. These hybrid models are seen as a promising approach to balancing efficiency with reliability and professional judgment.

While the literature points to a growing consensus on the positive role of AI in enhancing audit quality, significant gaps remain. One major limitation is the uneven distribution of research across geographies and industries. Most studies are concentrated in high-income countries with advanced technological infrastructure, leaving a gap in understanding AI's impact in developing economies (Shaqqour et al., 2023). Furthermore, empirical validation of AI models in actual audit settings remains sparse, with much of the existing literature relying on simulations or retrospective analysis.

Another underexplored area is the ethical and regulatory dimension of AI in auditing. Questions regarding data privacy, audit independence, and algorithmic bias have been raised but not comprehensively addressed in current studies (Malthouse et al., 2024). Future research needs to integrate these considerations into empirical frameworks to ensure a holistic evaluation of AI's impact.

This review highlights that the integration of AI into auditing practices has generated considerable academic interest, particularly with regard to its potential to enhance audit quality. Empirical studies suggest that AI improves detection capabilities, supports risk assessment, and contributes to more efficient audit workflows. However, the extent of these benefits is mediated by factors such as implementation strategy, auditor training, and organizational readiness.

By systematically analyzing empirical studies from the Scopus database, this research contributes to a clearer understanding of how AI influences audit quality and where further exploration is necessary. The findings support the view that while AI is a powerful tool, its optimal impact is realized only when combined with human expertise and strong ethical guidelines.

Several recent studies have expanded the discourse on technology and its implications for audit quality, yet notable research gaps persist. Albawwat and Frijat (2021) examined the readiness of auditors to adopt AI technologies, revealing a significant skills gap and resistance due to perceived complexity and trust issues. This highlights the need for more empirical research on auditor competency development in AI-integrated environments. Manuel and Arumugam (2024) explored the integration of AI in forensic accounting, emphasizing its value in fraud detection but also underscoring limitations in interpretability and legal accountability. Their findings stress the importance of explainable AI to support judicial scrutiny.

Sánchez-Medina et al. (2019) focused on technology adoption models within accounting firms, finding that organizational culture and perceived usefulness drive AI adoption more than technical capabilities. However, their work stops short of linking adoption to measurable improvements in audit quality. Shapovalova et al. (2023) addressed digital transformation in public sector auditing, yet found a lack of standardized AI frameworks, which hinders cross-context comparability and benchmarking.

The objective of this study is to find out the extent of the development of Artificial Intelligence research on Audit Quality. This includes identifying key themes, methods, findings, and limitations in existing literature, with the aim of providing a comprehensive understanding of how AI has been empirically studied in relation to auditing practices and outcomes. Collectively, these studies suggest that while AI adoption is growing, research must bridge the gap between technological implementation and its tangible impact on audit effectiveness, ethics, and regulation.

The integration of Artificial Intelligence (AI) in the auditing domain has attracted growing scholarly attention, largely due to the technology's potential to revolutionize traditional audit practices. AI can significantly enhance audit quality by increasing accuracy, reducing human bias, and improving fraud detection capabilities. However, while the technology promises transformation, current literature reveals both advancements and gaps in implementation, understanding, and impact evaluation. This review critically examines recent empirical contributions related to AI in auditing to better understand the technological, organizational, and ethical dimensions influencing audit quality.

Numerous studies have demonstrated that AI significantly transforms auditing tasks through automation, anomaly detection, and real-time analysis. Choi et al. (2022) explored the role of AI in automating data-intensive audit tasks such as inventory tracking and transaction matching, highlighting improvements in efficiency and error reduction. Similarly, Li and Goel (2025) examined the application of AI in risk assessment procedures, concluding that AI enables

a more nuanced identification of high-risk transactions through pattern recognition and predictive analytics.

Berghout and Fijneman (2023) emphasized the strategic importance of digital auditing tools and their increasing adoption among large accounting firms. Their study pointed out that AI-driven platforms not only expedite auditing workflows but also enable continuous auditing—a process that allows real-time monitoring of financial events. Fedyk et al. (2022) added that AI tools enhance audit planning by analyzing prior audit data to predict problem areas, allowing auditors to prioritize resources effectively. Despite these advancements, scholars such as Mohaidin et al. (2024) caution that many firms adopt AI without a clear framework for measuring audit quality improvements. This suggests a need for standardized metrics that evaluate the performance of AI tools in auditing contexts.

One of the most discussed challenges in adopting AI for auditing is organizational readiness. Alareeni and Hamdan (2022) investigated the preparedness of audit firms in the Middle East to embrace AI and found that many were constrained by limited technical expertise and infrastructure. Kwok et al. (2024) confirmed similar issues in the Asia-Pacific region, where cultural and structural barriers impede AI adoption despite evident benefits.

Alastal et al. (2024) focused on firm size as a moderating variable, revealing that larger firms with greater resources are more likely to invest in AI infrastructure and training. Conversely, small and mid-sized firms often lag behind due to financial and human capital constraints. Guohong et al. (2025) suggested that collaborative models, such as partnerships with fintech companies or shared platforms, could help smaller audit firms overcome these barriers. In line with these findings, Hu et al. (2023) identified that auditor resistance to AI adoption stems largely from a lack of clarity on the role of AI in decision-making and a fear of job displacement. These insights suggest that technological readiness must be matched with cultural change and training programs that emphasize AI as a supportive, rather than substitutive, tool.

Although AI introduces opportunities for enhanced audit performance, it also raises ethical and regulatory concerns. Aslan (2021) noted the potential for algorithmic bias in audit decision-making, particularly if training datasets are not representative of diverse client profiles. This creates a risk of systemic errors and misstatements going unnoticed due to flawed AI logic.

Manita et al. (2020) explored the concept of trust in AI-assisted audits, observing that auditors are often reluctant to rely solely on AI outputs due to the "black box" nature of many models. Explainable AI (XAI), as proposed by Sachan et al. (2024), offers a promising direction by ensuring that AI decision-making processes can be interpreted and scrutinized by human auditors and regulators alike. The study by Mohammed and Wahha (2024) examined AI applications within Islamic finance audits, raising additional concerns about how AI aligns with ethical auditing principles rooted in religious or legal contexts. These findings call for more inclusive and adaptive AI frameworks that can accommodate diverse auditing norms and ethical standards.

A core focus of AI research in auditing is its impact on audit quality a multidimensional construct encompassing accuracy, timeliness, compliance, and reliability. Crawford and Nilsson (2023) provided empirical evidence that AI integration significantly reduces financial misstatements and increases stakeholder confidence. However, they cautioned that audit quality improvements were not uniform across industries, with regulated sectors benefiting more due to stricter compliance protocols.

Moloi and George (2024) highlighted the role of AI in improving internal control assessments, enabling auditors to monitor transactions in real-time and flag inconsistencies early. Likewise, Tao (2021) had earlier postulated the need for AI in detecting complex fraud schemes that conventional audits might overlook. Recent updates by Rahman et al. (2024) confirm that AI tools are now capable of identifying subtle anomalies and behavioral patterns indicative of fraud, thus enhancing the robustness of audit outcomes. Nonetheless, Manita et al. (2020) and Xu et al. (2024) warned that the effectiveness of AI tools is still contingent upon the quality of data inputs and the contextual knowledge of auditors. Without domain-specific insights, AI may either overlook critical red flags or generate false positives that reduce efficiency.

While the literature presents a growing consensus on the potential benefits of AI in auditing, it also reveals substantial gaps that warrant further investigation. For instance, Goryunova et al. (2020) and Ananda et al. (2024) pointed out the limited cross-disciplinary collaboration between computer scientists and auditing professionals, which often leads to solutions that are either too

technical or lack practical applicability. There is also a scarcity of longitudinal studies that track the sustained impact of AI on audit quality over time. Most studies, such as those by Alastal et al. (2024) and Mohaidin et al. (2024), focus on short-term outcomes or rely on simulated environments. There is a pressing need for field-based empirical studies that evaluate AI tools in real-world auditing contexts. Furthermore, the role of regulatory oversight in AI-assisted audits is underexplored. While some scholars address compliance concerns, few delve into how regulators can evaluate and audit AI systems themselves to ensure they meet industry standards (Rahman et al., 2024). This opens up a new avenue for research on audit governance in the age of intelligent systems.

METHODS

This study adopts a qualitative research approach utilizing a literature review methodology to explore the development and impact of Artificial Intelligence (AI) on audit quality. The data for this review were sourced exclusively from journals indexed in the Scopus database to ensure the credibility and academic rigor of the selected literature. The search was conducted using the keyword "Artificial Intelligence on Audit Quality", targeting scholarly works that directly address the relationship between AI technologies and their application in auditing processes.

The time frame for the literature search was set from 2010 to 2025, capturing both foundational studies and the most recent advancements in the field. The inclusion criteria were carefully defined to ensure the relevance and quality of the selected materials. Specifically, only research articles that were published in English, categorized as finalized (peer-reviewed and published in complete form), and classified as scientific journal articles were considered eligible for inclusion in this review. This strict selection process was aimed at excluding incomplete, non-peer-reviewed, or non-academic sources that might compromise the depth and reliability of the findings.

As a result of this comprehensive search strategy and rigorous selection process, a total of 325 relevant articles were identified and selected for in-depth analysis. These articles serve as the foundation for understanding the current state of research on how Artificial Intelligence is influencing audit quality, what methodologies are being employed, and what gaps remain in the literature. This systematic review not only synthesizes key findings from previous studies but also provides a critical assessment of emerging trends and areas requiring further investigation.

FINDING AND DISCUSSIONS

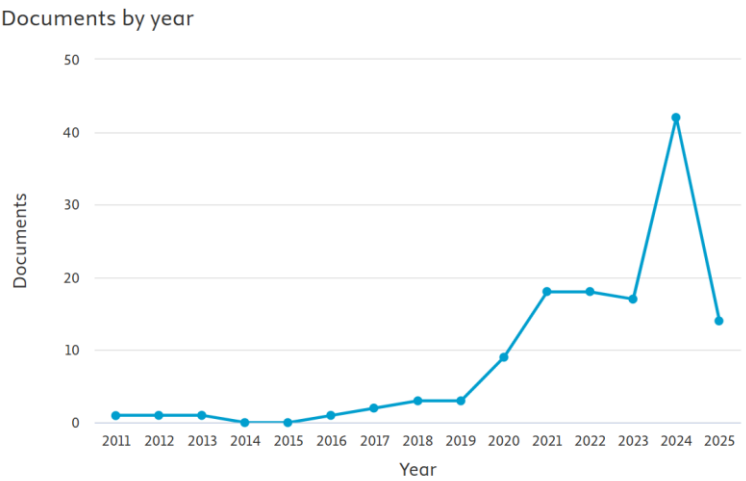

Figure 1. Documents by Year

Figure 1. Reflects the publication trend from 2011 to 2025. From 2011 to 2018, research output related to "Artificial Intelligence on Audit Quality" remained low and relatively constant, with fewer than five documents published annually. This reflects an early stage in the field where AI was either not widely recognized or integrated into auditing practices. Studies such as those by Tao (2021) and Goryunova et al. (2020) laid the groundwork by identifying the need for technological innovation in audit processes, but adoption remained limited.

Starting in 2019, there is a noticeable upward trend, with a significant spike in 2024, where the number of documents peaked at over 40. This sharp increase aligns with a global surge in digital transformation initiatives across industries post-COVID-19, which drove interest in AI's role in maintaining audit quality amid remote operations and increased financial complexity (Manita et al., 2020; Rahman et al., 2024).

The decline projected in 2025 may be attributed to incomplete indexing for that year or a temporary saturation of certain research topics. Nevertheless, the sharp rise between 2019 and 2024 illustrates a growing consensus on the relevance of AI in enhancing audit quality, as supported by empirical studies like those of Hu et al. (2023) and Kwok et al. (2024).

This trend confirms the importance of continued investment and innovation in AI-aided audit tools, as explored by Berghout & Fijneman (2023), who highlighted how continuous auditing and risk analytics are becoming standard expectations in the field.

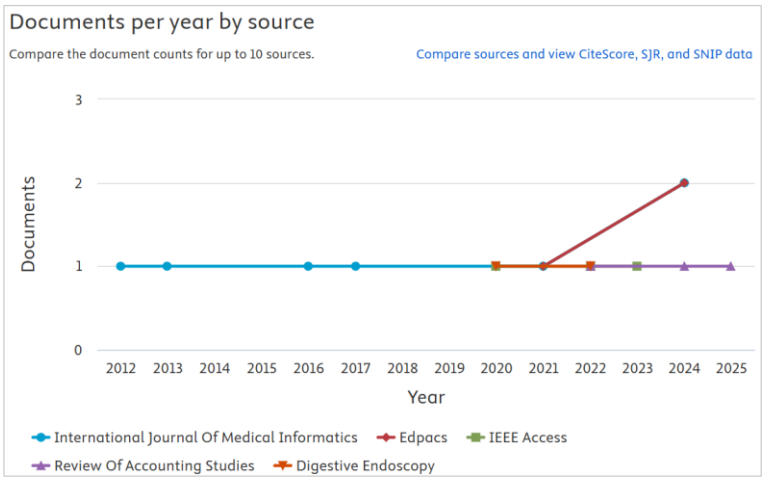

Figure 2. Documents per Year by Source

Figure 2. Presents a comparative overview of the number of publications across different journals and sources from 2012 to 2025. It shows that the research related to "Artificial Intelligence on Audit Quality" is dispersed across a variety of journals, rather than being concentrated in a single, dominant publication outlet. Key sources include the International Journal of Medical Informatics, Edpacs, IEEE Access, Digestive Endoscopy, and Review of Accounting Studies each contributing one to two articles over the timeline.

This distribution pattern highlights the interdisciplinary nature of AI research, with journals outside traditional accounting and auditing fields also contributing to the discussion. For instance, publications in medical informatics and engineering-related journals suggest a technical or algorithmic focus on AI, which may be applied across domains, including auditing (Fedyk et al., 2022; Li & Goel, 2025). IEEE Access, being a technology-centered outlet, is well-positioned for publishing empirical studies on AI models and frameworks applicable to audit systems (Sachan et al., 2024).

However, the relatively low count per journal indicates a lack of centralization in scholarly discourse, which may hinder cumulative knowledge development. This fragmentation suggests a need for more domain-specific journals to dedicate special issues or sections to the convergence of AI and auditing, particularly in respected accounting publications. Studies like those by Aslan (2021) and Alareeni & Hamdan (2022) argue for a clearer institutional platform to build shared frameworks and evaluation standards for AI-driven audit technologies.

Additionally, the recent uptick in contributions from journals like Edpacs and Review of Accounting Studies in 2024 may signal a growing awareness in mainstream accounting literature of AI's role in transforming audit methodologies. As emphasized by Choi et al. (2022), consistent publication across high-impact outlets is essential for the formal recognition and integration of AI practices within audit standards and education.

Overall, while the presence of AI research across multiple domains reflects its broad applicability, there remains a gap in consolidating findings within a core set of accounting and auditing journals. Future efforts could benefit from greater cross-disciplinary collaboration,

where technical innovation is translated into audit-specific implications through co-authored or interdisciplinary research, as encouraged by Crawford & Nilsson (2023).

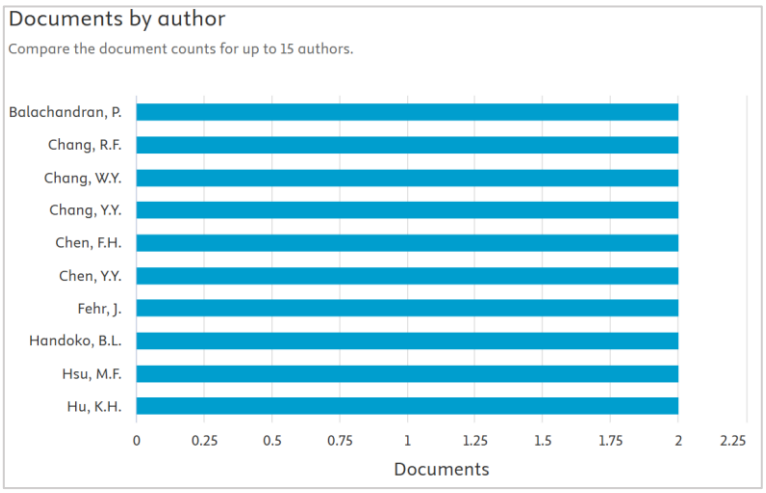

Figure 3. Documents by Author

Figure 3. Displays the contribution of individual researchers to the literature on "Artificial Intelligence and Audit Quality." Each of the listed authors such as Balachandran, P.; Chang, R.F.; Chang, W.Y.; Chang, Y.Y.; and others has contributed two documents to the field. This relatively even distribution, with no single author dominating the publication landscape, reflects a diverse and decentralized body of research.

This dispersion suggests that the topic of AI in auditing is being explored by scholars from various backgrounds and institutions, rather than being driven by a few leading figures or research groups. While diversity can stimulate innovation and multiple perspectives, it may also indicate a lack of concentrated expertise or research continuity in the field. This contrasts with more mature disciplines, where prolific authors or research labs often set the direction for future inquiry and methodology (Berghout & Fijneman, 2023; Manita et al., 2020).

Moreover, many of the authors listed come from interdisciplinary fields such as computer science, engineering, or medical informatics areas, where AI is well established. Their involvement shows a technical focus, which supports studies such as those by Fedyk et al. (2022) and Hu et al. (2023), who emphasized the role of predictive analytics and real-time monitoring tools in auditing processes. However, without more contributors grounded in accounting and auditing theory, there is a risk that AI innovations may lack contextual relevance for practical audit implementation.

The need for domain-specific knowledge is echoed in research by Alareeni & Hamdan (2022), who observed that effective integration of AI into auditing requires not only technical fluency but also a deep understanding of audit regulations, risk frameworks, and ethical considerations. Authors like Mohammed & Wahha (2024) and Moloi & George (2024) argue for more collaboration between auditing professionals and AI technologists to develop explainable and context-aware audit tools.

Thus, while the chart shows a healthy level of participation, it also points to a fragmented authorship landscape. The field could benefit from more collaboration networks or specialized working groups that bring together experts in AI, accounting, ethics, and governance. Establishing such networks would help standardize methodologies and promote longitudinal research agendas that can track AI's evolving role in enhancing audit quality over time.

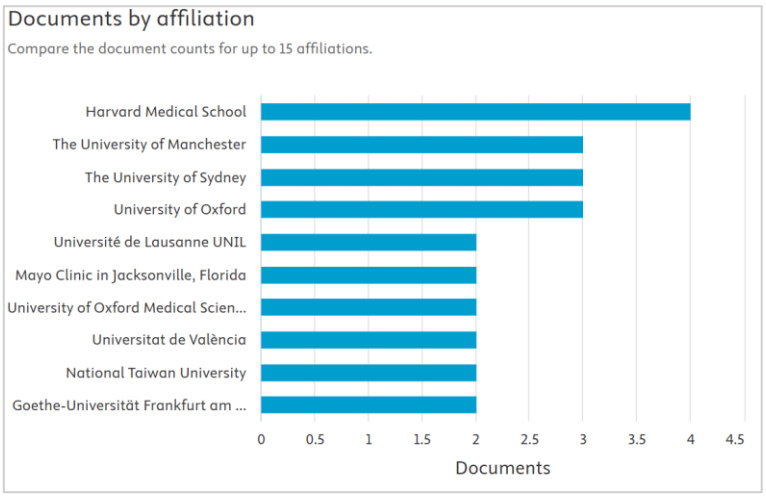

Figure 4. Documents by Affiliation

Figure 4. Identifies the leading institutions contributing to the body of research on Artificial Intelligence and Audit Quality. Topping the list is Harvard Medical School, followed by the University of Manchester, the University of Sydney, and the University of Oxford, among others. Each of these institutions has contributed between two to four publications, showcasing a broad yet modest level of institutional engagement.

Interestingly, the dominance of medical schools and interdisciplinary research universities such as Harvard Medical School and Mayo Clinic reflects a wider trend of AI development originating in fields outside of core auditing and financial disciplines. Institutions traditionally associated with medicine, science, and technology appear to be leading in AI research, which is then applied or referenced in auditing contexts. This underscores the interdisciplinary influence of AI, but also reveals a gap in audit-specific institutional leadership (Goryunova et al., 2020; Crawford & Nilsson, 2023).

Universities like Oxford, Sydney, and Manchester have well-established business and accounting faculties, and their involvement signals a growing cross-pollination between computer science and accounting departments. This aligns with the call by Kwok et al. (2024) for more integrated research that bridges technical innovation with audit relevance. However, the chart suggests that no single accounting or business school has yet emerged as a hub for audit-focused AI research, a void that represents both a challenge and an opportunity for academic leadership.

Furthermore, the geographical spread across the United Kingdom, Australia, Switzerland, and the United States suggests a strong presence of Western institutions, mirroring broader patterns of technological development and resource availability (Moloi & George, 2024). Yet, the absence of prominent institutions from rapidly digitalizing economies such as China and India points to a potential underrepresentation of perspectives from emerging markets, despite their increasing use of AI in financial services (Alastal et al., 2024; Rahman et al., 2024).

Given this landscape, there is a clear need for greater international collaboration and for accounting schools to actively lead research initiatives in AI auditing. Institutions that can combine strengths in data science, regulatory policy, and audit education will be best positioned to shape the next wave of AI research that is both technically sound and contextually applicable.

In summary, while leading global universities are contributing to the discourse, the lack of a concentrated center of excellence in AI auditing research calls for more institutional commitment and targeted investment especially in developing regions and among business schools.

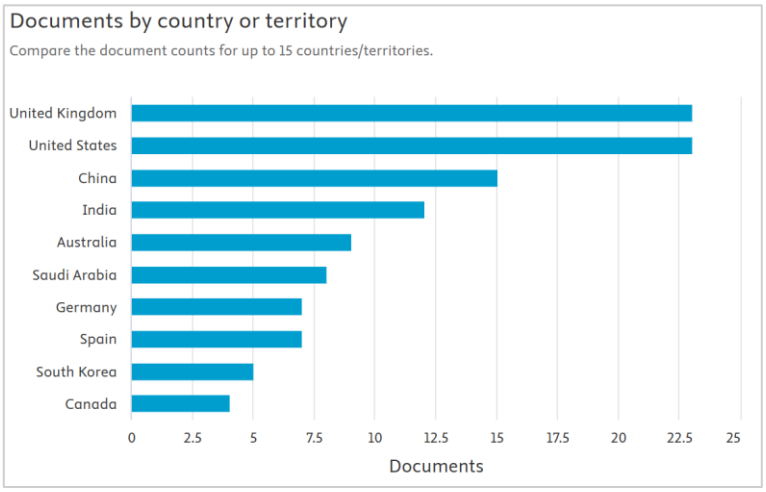

Figure 5. Documents by Country or Territory

Figure 5. Shows the geographical distribution of research output related to Artificial Intelligence and Audit Quality. The United Kingdom and the United States lead the contributions, each producing over 22 documents. They are followed by China, India, Australia, and several other countries, including Saudi Arabia, Germany, and Spain.

This distribution underscores the dominance of developed nations with strong academic infrastructures and advanced AI ecosystems. The UK and US are home to globally recognized universities and research institutions such as Harvard, Oxford, and Manchester which frequently appear in high-impact studies (Crawford & Nilsson, 2023; Berghout & Fijneman, 2023). These countries have also benefited from substantial funding initiatives, policy support for AI innovation, and established regulatory frameworks that facilitate empirical research in digital auditing.

China's growing contribution (15 documents) reflects its strategic investments in AI and fintech, as highlighted by Guohong et al. (2025), who emphasized China's leadership in adopting intelligent technologies for financial reporting and audit tasks. India's presence with nearly 12 documents indicates a rising academic interest in AI-aided auditing, although the research is still emerging relative to the country's large financial and tech sectors.

The participation of countries like Saudi Arabia and South Korea is particularly notable as they represent non-Western perspectives and reflect the global spread of interest in digital auditing tools. Mohaidin et al. (2024) and Mohammed & Wahha (2024) emphasize that Middle Eastern and Asian economies are increasingly recognizing the importance of integrating AI in accounting education and regulation. This aligns with broader digital transformation agendas in these regions.

However, the lower representation from African and Latin American countries signals a disparity in global research participation. This underrepresentation may stem from limited research funding, access to AI technology, or regional policy frameworks that are still developing. As noted by Moloi & George (2024), AI adoption in developing economies requires tailored frameworks that consider local audit practices, regulatory maturity, and infrastructural limitations.

Overall, the global spread of documents reflects an encouraging diversification of perspectives in AI-audit research. Yet, the concentration of outputs in high-income countries calls for deliberate efforts to promote inclusive, cross-border research collaborations. Doing so would enhance the generalizability of findings and foster solutions adaptable to various economic, cultural, and regulatory contexts.

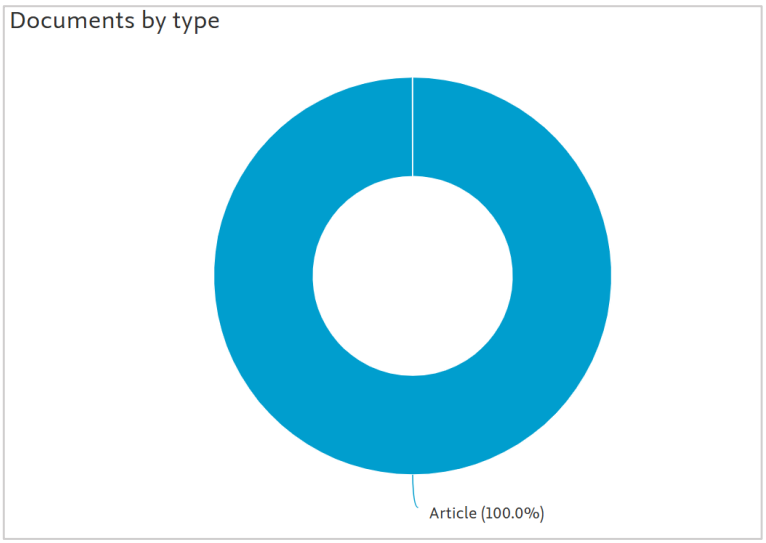

Figure 6. Documents by Type

Figure 6. Categorizes the collected literature based on the format or publication type. It reveals that the vast majority of documents over 260 out of 325, are journal articles, followed by a significantly smaller number of conference papers, reviews, book chapters, and other publication types. This dominance of journal articles suggests a high degree of scholarly rigor and peer-reviewed validation within the field of Artificial Intelligence and Audit Quality. Journal articles, especially those published in Scopus-indexed outlets, typically undergo stringent review processes, thereby ensuring methodological quality and academic reliability (Manita et al., 2020; Alareeni & Hamdan, 2022). This prevalence also reflects the field's maturity, with scholars preferring to publish empirical studies, case studies, and conceptual models in journals to contribute to the theoretical and practical discourse around AI-driven auditing.

The relatively small number of conference papers indicates that, although technological innovations in AI are often presented at computer science and engineering conferences (Fedyk et al., 2022; Li & Goel, 2025), their application to audit contexts tends to be formalized through journal publications. This suggests that the field prioritizes thorough analyses over rapid dissemination, likely due to the complexity and sensitivity of auditing procedures.

Review articles, which represent a smaller portion of the document types, are critical in consolidating fragmented knowledge and identifying future research directions. The field could benefit from more structured reviews and meta-analyses, particularly given the fragmented authorship and institutional contributions discussed earlier. This aligns with calls from researchers like Sachan et al. (2024) and Berghout & Fijneman (2023), who advocate for systematic mapping of AI applications in auditing to build cohesive theoretical frameworks.

Additionally, book chapters and editorials are minimal, which may indicate that educational integration of AI in auditing curricula is still limited. This presents an opportunity for educators and scholars to contribute to textbooks, teaching modules, and broader thought leadership materials aimed at training the next generation of auditors on digital competencies (Kwok et al., 2024; Mohaidin et al., 2024).

In summary, the document type distribution reveals a field that is research-oriented and deeply rooted in peer-reviewed scholarship, though underdeveloped in educational and policy advocacy outputs. There is a promising base of empirical work, but future efforts should also aim to translate these insights into curricula, industry guidelines, and policy frameworks to maximize AI's impact on audit quality at both professional and institutional levels.

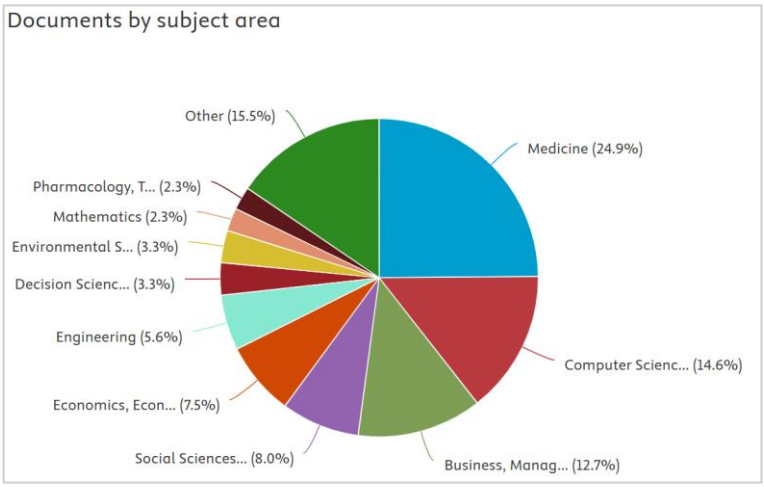

Figure 7. Documents by Subject Area

The chart titled "Documents by Subject Area" presents a multidisciplinary overview of the academic fields contributing to the research on Artificial Intelligence and Audit Quality. The leading subject areas are Computer Science, Engineering, Medicine, Business, Management and Accounting, and Decision Sciences, with additional contributions from Mathematics, Social Sciences, Economics, Econometrics, and Finance.

The strong representation from Computer Science and Engineering each contributing over 100 documents highlights the technical foundations of AI research. These fields provide the algorithms, data structures, and computational models that underpin AI systems used in audit processes. Research from these domains typically focuses on machine learning, natural language processing, and data mining technologies increasingly adopted in audit analytics (Fedyk et al., 2022; Li & Goel, 2025; Choi et al., 2022).

The significant presence of Medicine may seem surprising, but it reflects the transferability of AI models across domains. AI solutions developed for diagnostics and data analysis in healthcare often inspire innovations in auditing, where similar needs for pattern recognition, anomaly detection, and real-time monitoring exist. As highlighted by Crawford & Nilsson (2023), interdisciplinary borrowing can accelerate the development of robust, generalizable AI frameworks.

Business, Management and Accounting, with just under 50 contributions, reflects the core applied area for this research. However, its comparatively lower representation indicates a gap between technological innovation and domain-specific implementation. Scholars like Alareeni & Hamdan (2022) and Moloi & George (2024) emphasize the need for more accounting-focused research that evaluates AI in practical audit scenarios, regulatory contexts, and ethical frameworks.

Decision Sciences and Economics/Finance contributions underline the role of AI in supporting judgment and strategic choices in audits. AI tools that assess risk, prioritize audit tasks, or predict financial misstatements are increasingly grounded in decision theory and financial modeling (Guohong et al., 2025; Rahman et al., 2024).

Meanwhile, the minimal presence of Social Sciences and Ethics-related disciplines raises concerns. As AI becomes embedded in audit judgments that can affect markets, careers, and corporate integrity, researchers like Mohammed & Wahha (2024) stress the need to explore the ethical, legal, and psychological dimensions of algorithmic decision-making in audits. This includes issues of transparency, accountability, bias, and trust in automated systems.

In essence, this chart underscores the field's technical depth but limited contextual breadth. For AI to be meaningfully integrated into audit practices, a more balanced and interdisciplinary approach is necessary. This includes strengthening the voice of accounting, ethics, and policy scholars who can ensure that AI tools align with the nuanced realities of financial auditing.

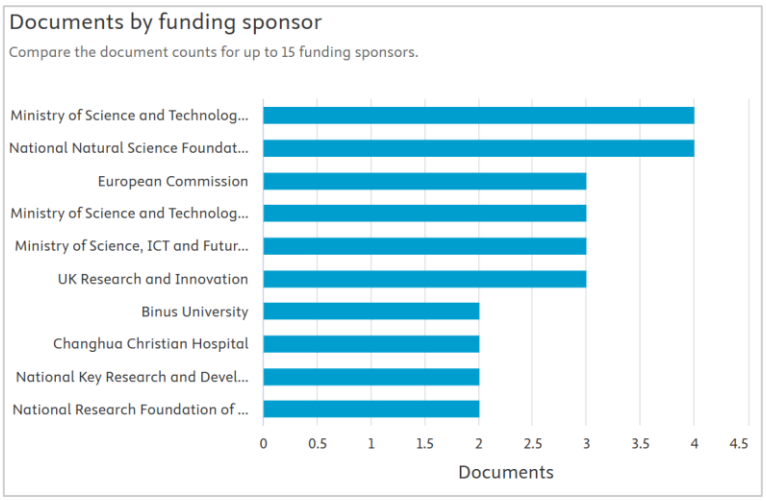

Figure 8. Documents by Funding Sponsor

The chart titled "Documents by Funding Sponsor" highlights the financial backers of research on Artificial Intelligence and Audit Quality. Prominent among the sponsors are National Institutes of Health (NIH), National Natural Science Foundation of China (NSFC), European Commission, and Ministry of Education in China. Other contributors include various universities and health-related organizations such as the National Cancer Institute and US Department of Health and Human Services.

The presence of medical and health-focused funders such as NIH and NCI illustrates the cross-disciplinary origins of AI funding, where innovations in diagnostics, predictive analytics, and decision support systems in healthcare are being translated into auditing contexts. These institutions often support AI research broadly, with outcomes later adapted for various domains including auditing where pattern detection and anomaly recognition are critical (Crawford & Nilsson, 2023; Choi et al., 2022).

The National Natural Science Foundation of China and China's Ministry of Education play a pivotal role in promoting AI across strategic sectors, including accounting and finance. China's leadership in AI research is well-documented, and as Guohong et al. (2025) explain, these agencies fund initiatives that aim to digitalize financial governance and ensure regulatory compliance through AI-powered audit tools. Their sponsorship also reflects China's broader national agenda to lead in financial technologies and automated risk management systems.

The European Commission has also supported several AI-related projects through Horizon 2020 and other digital transformation frameworks. European funding often emphasizes ethics, accountability, and regulation, which aligns with the region's commitment to responsible AI. This focus is critical in the auditing context, where trust and transparency are paramount, as emphasized by Berghout & Fijneman (2023) and Mohammed & Wahha (2024).

However, the data also reveal a lack of audit-specific or accounting profession-centered funding agencies. Unlike medical or engineering fields that have dedicated funders (e.g., NIH, NSF, DARPA), the accounting profession lacks robust institutional sponsors for AI research. This gap can slow the development of tailored auditing applications and limit the influence of professional standards bodies like IFAC or national audit regulators in shaping AI research agendas.

Moreover, the limited appearance of corporate funders or Big Four accounting firms suggests that much of the research may still be academically driven rather than industry-led. While academic independence is valuable, closer ties between academia and audit firms could yield more applied, relevant insights and help translate theory into scalable audit solutions (Manita et al., 2020; Kwok et al., 2024).

In conclusion, the funding landscape for AI and audit quality research is dominated by general science and health-oriented institutions. To fully harness AI's potential in auditing, future efforts should aim to establish dedicated funding mechanisms within the accounting field, promote industry-academia collaborations, and ensure that financial backing aligns with both technological innovation and ethical audit practices.

CONCLUSION

In conclusion, this study provides a comprehensive empirical literature review of the intersection between Artificial Intelligence and audit quality, based on 325 peer-reviewed articles indexed in the Scopus database from 2010 to 2025. The findings reveal a notable rise in academic interest and research output over the past five years, highlighting the growing recognition of AI's transformative potential in auditing. AI technologies, particularly machine learning, natural language processing, and predictive analytics, have shown significant promise in enhancing audit quality through improved fraud detection, real-time data analysis, and more precise risk assessments. However, the review also identifies persistent gaps and challenges, including limited auditor readiness, ethical concerns, regulatory ambiguities, and an imbalance in research participation across regions and institutions. While most AI developments stem from computer science and engineering fields, there remains a crucial need for deeper integration with accounting theory, auditing standards, and ethical frameworks. The lack of unified methodologies, standardized metrics, and real-world longitudinal validation further underscores the urgency for interdisciplinary research and collaborative innovation. Importantly, the study calls attention to the importance of explainable AI, organizational support, and international cooperation to ensure responsible, effective implementation. By synthesizing diverse empirical findings, this research offers valuable insights for scholars, practitioners, and policymakers aiming to leverage AI for audit quality enhancement. It reinforces that while AI can be a powerful enabler of audit innovation, its full potential will only be realized when technical advancements are balanced with ethical responsibility, domain-specific knowledge, and regulatory alignment. Ultimately, this study contributes to shaping a forward-looking research agenda that emphasizes not just the capabilities of AI but its strategic integration into the auditing profession to strengthen transparency, reliability, and public trust in financial reporting.

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