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Investigation On Application of AI Technology In Auditing

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Abstract: ***In addition to the advantages that technology presents for audits, the rapid development of AI technologies is making it possible to have an even greater influence on how effectively audits can be performed. As AI increases the speed and quality at which information can be analyzed, assessed and processed, this will continue to provide auditors with better and faster tools to perform their duties. However, there are challenges that come along with the increasing usage of AI in auditing such as; transparency into algorithms being used, privacy and security of data being used, lack of qualified personnel who can understand, implement and evaluate AI and many other potential issues. Possible ways to address some of these challenges include; improving and securing the security of the data being used, increasing and improving the accuracy and transparency of the algorithms being developed, establishing standard(s) for auditing AI, and providing training and support for audit staff to develop skills related to using AI.***

Key words: ***AI technologies, auditing AI, accuracy and transparency, algorithms, privacy, security skills.***

1. Introduction- Artificial Intelligence (AI) represents an important component in the rapidly growing Information Technology (IT) industry, and AI is influencing each aspect of our lives. In particular, artificial intelligence is transforming the traditional audit models used in the field of Financial Auditing. Due to advancements in AI-related technologies such as Machine Learning, Natural Language Processing, Big Data Analytics, the efficiency and quality of Financial Audit Work are increasing dramatically. Therefore, "this allows auditors to focus their efforts on strategic analysis and decision-making". AI technology has the ability to increase the efficiency of audits, decrease errors associated with audits by utilizing automated data collection, cleaning, analysis, and risk assessments; and expand the scope and the level of complexity of audits that can be performed, which enables the audit function to perform more complex data analysis functions, while meeting the dual requirements of business organizations today for both "audit quality and efficiency. The application of AI to risk management and compliance review, meanwhile, provides an alternative way to think about the work of auditors". This enables the potential identification of financial anomalies or risk areas, the rapid issuance of warning signals as well as the provision of assurance that the financial reporting and regulatory compliance of firms is at a level that is above average. The "continued development of AI indicates that auditing tools and systems will be increasingly intelligent in the future to include features such as real-time analysis of data, risk forecasting, automated report generation and the incorporation of emerging technologies, including blockchain and big data to improve both the efficiency and security of the audit process".

2. Literature review- AI is also able to quickly and thoroughly review "large amounts of transactional data to identify unusual patterns" which could indicate a financial problem or possible fraudulent activity. In addition, AI technology, such as AI Audit for Cash, has enhanced both the quality and efficiency of audits and has greatly simplified the performance of many critical audit functions including bank and cash balance reconciliations.

Although the technology of AI has certainly made auditing easier and faster, there are still several important ethical and risk management considerations when using AI. Some experts and scholars have raised concerns that AI will likely introduce additional biases into audit results and will further reduce the transparency and accountability of audits. For example, an AI system is only going to learn from the biases in the "input data used to train it; therefore, if the input data is biased or discriminatory, the resulting audit results will be too".

Additionally, AI often considered "black boxes," which means they do not provide transparent explanations of how they arrive at their conclusions. Auditors will therefore face challenges in understanding and explaining the rationale behind the decisions made by these systems.

Researchers and practitioners have proposed a number of solutions to address these issues. For instance, we must develop pertinent systems to guarantee information security and seamless system operation, train auditors in AI abilities, "bolster the administration of AI audit systems, and increase the

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use of AI technology in audit work to save costs and boost productivity. In order to guarantee that AI technology is secure, reliable, compliant, and morally sound, the audit sector should simultaneously set up a responsible AI governance mechanism".

There are advantages and disadvantages of using AI technology in auditing. While taking advantage of AI's ease, future research and practice "must continue to investigate how to successfully manage and regulate these dangers and guarantee the caliber and legitimacy of audit work".

STATUS OF APPLICATION- Progress of Application: In order to increase the effectiveness and caliber of audit work, several accounting firms have started investigating and implementing AI technology, which is quickly becoming the standard in the field of auditing. The traditional audit procedure is gradually being altered by the use of AI technology in law firms' audit work. Auditing today uses more than ever Artificial Intelligence (AI). Auditors now use AI to better identify potential problems with an organization's internal controls, make quicker decisions about what data to review, and create more accurate and higher-quality "audit reports".

The 'Big Four' "international accounting firms were among the first to apply AI to audit work; however, this technology has been around long enough that many organizations have established extensive programs for its use". As a leader in AI-based audit applications, "Deloitte is one of the largest professional services networks in the world. Smart Audit", a platform offered by Deloitte, enables the automation of "audit processes such as risk assessment, data analysis and report generation" utilizing machine learning and data analytics. In addition to its AI-based Smart Audit platform, Deloitte conducted research to explore how AI was currently being utilized within the company's operations to provide "insight into the application of AI technology. In terms of AI-based auditing, PwC has invested heavily and applied AI to a significant degree to its audit work". PwC developed and implemented AI-based technologies that utilize large volumes of data from transactions to identify discrepancies or potential risks. Furthermore, PwC employed AI-based technology to enhance the speed and accuracy of its audits, as well as to investigate new methods for auditing. On a global basis, EY has taken the lead in applying AI technology to audit services. EY employs AI-based technology to conduct comprehensive data analysis to identify major trends and issues affecting markets and businesses. Additionally, EY examined the use and associated "risks of generative AI in the field of auditing" and focused on implementing AI-based technology for financial planning and analysis.

In addition, AI is being aggressively introduced into "KPMG's audit services. KPMG utilizes "AI-based tools to improve the efficiency of their audit work, specifically in terms of transaction analysis and risk assessment. According to a report from KPMG, 82% of all businesses globally are currently using AI-based technology for audits". It is widely recognized that AI-based technology can significantly enhance both the quality and effectiveness of audits. In addition "to the four international accounting firms, many regional and local accounting firms are currently exploring the possibility of using AI-based audits. While they do not have the same level of resources or scale as the "Big Four", some of these smaller firms are beginning to implement AI-based technology in their audit services through the use of off-the-shelf AI software solutions, such as Mindbridge AI".

TECHNICAL ANALYSIS- Techniques of Machine learning: The "principal application of machine learning to auditing is the analysis of large datasets containing complex financial information, and the analysis of this data is done autonomously and intelligently." Machine learning models may be trained utilizing prior audit data to identify potential risk areas or uncharacteristic patterns. For example, supervised machine learning models could analyze transactional data to recognize irregularities in a company's transactions and thus allow an auditor to timely identify potential fraud or other accounting issues. Furthermore, machine learning could aid in assessing risk by examining both internal and external aspects of the organization and providing an auditor with predictive models of potential future financial issues in which they could create preventative measures. "Machine learning algorithms may develop automatic risk assessments through past data and market trends to assist in audit decision-making during the audit planning process." Likewise, "machine learning may be used to automate testing to enhance audit coverage and frequency during the substantive testing phase. Additionally, machine learning provides auditors with additional insight into their client's operations and assists them in understanding the interrelatedness of various data elements. There are risks to the

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use of machine learning in auditing. Some of these include, but are not limited to, the interpretation of machine learning algorithms, the protection of data privacy and the determination of audit responsibility".

Natural Language Technology (NLT)- NLT "may be used to gather and analyze written information in financial documents throughout the audit process. Auditors can utilize NLP to automatically identify key financial ratios and risk factors in financial reports in order to provide a more thorough examination of the company's financial condition. In addition, NLP can be utilized to automatically generate audit reports and the associated analysis charts, to improve the quality and timeliness of audit report preparation. NLP technology can assist auditors in comprehending and evaluating management's justifications and declarations throughout the audit communication phase in order to more precisely evaluate the company's financial situation. Additionally, NLP technology can be utilized to support audit choices by automatically analyzing market conditions and customer input. The use of NLP technology in auditing is also limited by a number of factors, including the complexity and diversity of languages, the integrity and quality of text data, and other problems".

Data mining technology- In order to find "patterns, trends, and anomalies in the vast volumes of financial data that are analyzed" and mined during the audit process, data mining technology is applied. By using data mining tools, auditors can enhance the precision and predictability of their audits and promptly detect possible financial issues. For instance, "cluster analysis can find trade groups with similar traits, association rule mining may find the relationship between various financial indicators, and prediction models can forecast an organization's future financial situation. Data mining techniques can be utilized to automate testing during an audit's substantive testing phase, increasing audit coverage and frequency". Additionally, data mining can offer deeper business insights and assist auditors in comprehending the intricate relationships hidden within the data.

Optical character recognition- Financial document processing can be automated with the use of optical character recognition (OCR) technology. Auditors can expedite data entry and verification by rapidly converting paper contracts, invoices, and other financial documents into electronic format using OCR technology. This guarantees "the accuracy and completeness of financial data while also increasing data processing efficiency and lowering human error. OCR technology can automatically read and extract important information from financial documents, such invoice number, amount, date, etc., during the data collecting phase of an audit, making data entry easier. Additionally, OCR technology can be integrated with the tax system to enable the automated extraction and validation of invoice data, hence streamlining the audit procedure. Because of the issue of inaccurate information, the application of OCR technology cannot fully rely on information extraction". For example, "handwritten text recognition is difficult, document quality affects OCR technology accuracy, and so on. To ensure the accuracy of the information, auditors must screen and reprocess the extracted data".

APPLIED CONTENT ANALYSIS- Utilize data analysis to evaluate risks: Data analysis and risk assessment are two key areas where AI technology is used in auditing. In addition to processing huge financial datasets with Machine Learning and Data Mining, AI "can recognize and flag trends and anomalies within those datasets which could represent an indication of financial fraud or accounting irregularities." AI-based auditing software also learns from past audit experiences and assists the auditor in their decision-making through providing additional data and analytical insights. For example, AI can review "the content of a company's financial report; identify key financial metrics; identify potential risk factors reported; and even extract data from news articles and social media which impacts the Company's stock price and/or reputation." Further examples include "building predictive models to assess an entity's credit and market risks, and applying Association Rule Mining to find correlations among other financial metrics. Additionally, the use of AI in risk assessment" makes audits more proactive and focused by allowing auditors to identify and address any financial issues sooner.

Enhance the audit process with automation- The integration of AI technology into the audit process can automate many audit procedures. "Using automated tools, AI technology can be easily integrated into an organization's Information Systems (IS) to automatically collect, organize and provide relevant data in real-time, including but not limited to financial data, operational logs and electronic documents." This greatly reduces the potential for human error when collecting and inputting

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data, in addition to the amount of time spent performing such tasks. "During the data cleansing phase, AI algorithms can quickly and accurately detect and eliminate duplicate records and incorrect data, thereby ensuring that the data set used for analysis will be accurate and consistent. Using advanced analytical models like Anomaly Detection Algorithms and Predictive Analytics, AI technology can rapidly identify abnormal patterns and potential risk areas in the data. With this ability, auditors can focus their time on addressing more complex issues rather than spending a significant portion of their time on basic data analysis. Finally, during the Audit Report Generation Phase, AI can generate the audit report. AI can also generate charts and summary tables that reflect the risk assessment(s) and key financial indicator analysis. Both of these functions enhance the quality, completeness, speed and relevance of the audit report".

Data Visualization in Auditing- "AI has the potential to enhance audit data visualization. AI can extract key financial data points from large volumes of financial data through Data Mining and Analysis. This key financial data point information can then be displayed using data visualization tools, such as charts and reports, to enable the auditor to quickly and easily understand the financial health and associated risk of the business. AI's multi-dimensional data analysis capabilities allow auditors to analyze data from multiple angles and identify complex inter-relationships between data. AI can establish the correlation between several key financial indicators and predict the future financial direction of the business. AI can also display the results of its analysis visually, creating charts and models that assist the auditor in understanding the reasoning behind the data. Moreover, AI's Deep Learning Technology has shown unique advantages in High-Dimensional Data Visualization. Using Dimensionality Reduction Techniques, it is possible to project high-dimensional data into lower dimensional spaces. As a result, auditors are able to visualize and analyze data in two-dimension and/or three-dimensions. This visualization technique provides richer and more dynamic information to support audit decisions, providing insight into both the underlying structure of the data and how the data evolves over time."

APPLICATION EFFECT ANALYSIS- Auditing can be made more efficient: Machine learning and data mining are being utilized by "Artificial Intelligence (AI)" technology for the use of data analysis and risk assessment, for the ability to "quickly analyze large volumes of complex financial data and automatically find potential risks and abnormalities and improve auditing accuracy and predictability. In addition, artificial intelligence is playing an increasingly important role in automated auditing. By using automated tools, AI can automatically gather financial data, carry out data cleaning, analysis, and report generation, cut down on the time and error rate of manual operations, and enhance the accuracy and completeness of data. AI technology gives auditors the ability to create data analysis indicators to support data analysis and audit applications like risk warning and continuous audit, as well as to identify risk scenarios and data sources based on business risk characteristics". Beginning with a parallel approach in utilizing Artificial Intelligence (AI), and by incorporating Natural Language Generation technologies, it can generate audit reports in a timely and transparent manner that will enhance the integrity and transparency of audit reporting. Robotic Process Automation is a form of Artificial Intelligence Technology, that can automatically collect and analyze large amounts of external data, provide real-time information for auditing purposes; automatically perform transactional activities such as collecting, analyzing and comparing data; reduce time associated with the initial steps of the audit process and increase overall audit efficiency.

Boost Quality Control on Audits- The use of "AI Technology" will improve the quality of audits. AI has the capability of identifying possible future financial problems for companies using deep learning and pattern recognition, thus allowing auditors to identify risk more clearly. AI can analyze and interpret textual information in financial reporting through the application of Natural Language Processing (NLP) technology, thus providing additional comprehensive data assistance. AI also allows auditors to identify and respond rapidly to emerging threats using its real-time monitoring capabilities.

In addition, "AI Technology can assist in the preparation of audit reports. Using Natural Language Generation (NLG)", audit reports can be prepared efficiently and accurately, thereby improving the transparency and credibility of audit work. Furthermore, AI Technology is being utilized in audit quality reviews, to provide assurance "that the audit work meets professional standards and

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regulatory requirements, and to ensure the accuracy and reliability of the audit results". Continuous auditing quality review support will also be provided by AI Technology, through continuous monitoring of business financial transactions in real-time. Routine review tasks can also be automated by AI Technology, including the verification of the integrity of financial statement and transaction data. In addition to enhancing audit efficiency, AI Technology will reduce audit process time related costs.

Reduce audit costs- The "AI has had a huge impact on the Cost Structure of the Audit Industry". Because AI is able to automate many of the routine and manual aspects of an audit, it greatly reduces a firm's reliance on Human Resources and therefore its costs. In addition to the gathering and compilation of data, the review of standard financial practices, as well as many of the standard analytical functions, can all be automated. These automation capabilities help "to reduce the amount of time and money spent during the course of a traditional audit." The University of California, Berkeley's Anastassia Fedyk et al. have found that when audit firms make investments in AI Technology, they will experience improvements in their audit quality and effective management of their audit costs. Therefore, this establishes a positive relationship between a firm investing in AI Technology and lowering their audit costs. Furthermore, using AI technology allows for a better allocation of an audit firm's resources. When auditors are relieved from the burden of heavy transactional labor, "they can focus on more complex and valuable analytical work such as Risk Assessment, Strategic Decision Support, and Consulting Services. This results in higher quality and value of the audit work being performed; however, it also provides audit teams with the ability to adapt to more complex and challenging audit situations and new areas of risk, both of which contribute to lower audit costs".

CHALLENGES- Risks of Data Security: Data security and data privacy issues have been evident as AI auditing occurs. Sensitive financial data concerning both individuals and organizations is being studied for the purposes of auditing. A breach in this type of sensitive data could create problems such as loss of reputation, legal liability and loss of revenue. AI technology generates a high volume of data that must be processed and therefore creates opportunities for interception of data while the data is being processed, stored and transmitted. An additional issue created by AI technology is that the decision making process in complex AI systems are often completely opaque (or "black box") and this lack of transparency causes auditors to question the logic behind the decisions made by AI technology. Therefore, auditors are unable to maintain audit quality and data privacy standards are compromised. As the rate of innovation of AI technology exceeds current law and regulation, there exist many areas of data security and protection that will require auditors to invest in technology and networking as well as invest in the security of networks, since AI systems used in auditing will become targets of hackers.

Incorrect Information Processing- There exist several areas where incorrect information is being processed regardless of whether the use of "AI technology in auditing has caused an increase in the efficiency of data processing and the ability of audit work to make intelligent decisions. For example, the success of an AI system depends on the accuracy and completeness of the input data, and incorrect or incomplete financial data may distort the results of AI analysis". In addition, AI algorithms –especially those that utilize machine learning and deep learning– may experience difficulty in capturing all of the relevant business logic and nuances within complex business environments, thereby "increasing the likelihood of errors in audit results. Additionally, the lack of transparency of AI technology regarding its decision-making process creates obstacles for auditors to understand and verify the basis of the decision-making process of AI systems. Not only does this reduce the reliability and effectiveness of audits, but it also provides auditors with the opportunity to over-rely on AI technology and overlook important human judgment and intervention. Although natural language processing and image recognition technologies are being utilized to interpret unstructured data such as text and photographs, the accuracy of these technologies is still in need of improvement– particularly in the area of handling complex and confusing financial data. False positives or false negatives in real-time monitoring and anomaly detection by AI technology may also delay the timeliness and accuracy of audits".

Inconsistency in technical specifications- There are no clear technical standards for using "AI technology in the auditing field. Because different audit institutions may use different AI tools and approaches, it may be hard to compare audit results, which could affect the consistency and

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dependability of audit work. It can be hard for auditors to make sure that their work follows professional standards, which could make audits riskier and degrade their quality". Without standards, auditors also have a hard time making specific suggestions about how to choose, build, and use AI technologies. This can result in investment in technology and waste of resources. In addition, the absence of specific technical standards (such as safeguarding data privacy, being transparent about algorithmic decision-making processes, and defining audit accountability) has exacerbated many of the difficulties associated with the ethical and legal aspects of auditing AI. The lack of unification among technical specifications and standards for auditing AI will likely limit the ability of educational institutions to develop curricula and programs in auditing education and professional development in auditing; it will also constrain the ability of auditors to have similar levels of training and direction in using AI technology, thereby limiting their ability to acquire and utilize AI technology.

Insufficient technical skills- The increasing reliance upon AI technology by auditing firms is indicative of a lack of technically skilled employees. The increasingly data intensive nature of the auditing process, coupled with the growing use of machine learning in auditing, has created an environment in which auditors require advanced analytical and technical skills. However, these skills are not possessed by the vast majority of auditors. As a result, auditing firms are having difficulty identifying or developing individuals who possess a combination of technical/analytical expertise in accounting and auditing and technical/analytical expertise in AI technology. Therefore, auditors performing AI audits are required to possess extensive knowledge and experience of auditing, combined with the ability to comprehend and utilize complex algorithms, analyze data, and interpret the results of audit evidence generated through the use of AI. Additionally, the continually evolving nature of AI technology requires auditors to continue to upgrade their technical/analytical skills, which will further exacerbate the problem of competency. A "lack of competency will restrict the extent and depth of AI technology utilized in auditing, and may impede the advancement of audit quality and innovation. At the same time, the lack of competency will increase the cost of audit services due to the scarcity of qualified personnel to perform the work".

COUNTERMEASURES- Keep information safe and private: Auditors have to implement very strong data management and security protection policies in order to protect all sensitive data throughout its lifecycle (collection, storage, processing, analysis). The implementation of such policies will involve the use of encryption technologies in order to protect data transfer as well as access control and authentication mechanisms in order to limit who can access the data. Furthermore, auditors have to establish clear data processing procedures. The auditors have to ensure that data processing operations are legitimate and follow data protection regulations "so that data subjects may understand how their personal data is processed". Moreover, auditors have to obtain professional education in data protection and data security "in order to better understand the importance of securing data and acquire the necessary skills and knowledge". Audit organizations have to conduct data security risk assessments and audits regularly in order to quickly identify and correct any potential vulnerabilities in the data. Audits have to be designed and implemented in a manner which is transparent and open and where results are reliable. Algorithms used in AI systems have to be understandable and visible to stakeholders in order to maintain transparency and trustworthiness. Auditors have to work with technology suppliers, regulatory bodies and industry associations to agree upon a consistent approach to data protection and to establish common security standards and best practice approaches for AI audit technologies.

Increase data accuracy in audits- There are many actions that the audit community has to take to ensure audit quality as AI technology may produce inaccuracies when processing data in audits. First, auditors have to make sure "that the AI systems they utilize are trained and operate on complete and accurate data to reduce the effects of analytical bias caused by incomplete data. Auditors have to increase their knowledge of AI algorithms, increase their ability to review algorithms' decision-making processes and ensure that AI system outputs are capable of being rationally explained and validated. Auditors also have to implement a quality control procedure for AI audits which includes regular model performance evaluations and random samples of audit results to monitor the accuracy and consistency of AI systems. At the same time, "it is vital to increase oversight of the utilization of AI technology in

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auditing, to develop relevant industry standards and operational guidance, and to outline the boundaries and constraints of AI auditing." Auditors have to collaborate with technology developers to improve the adaptability of the system, reduce algorithm errors", and continually improve AI models.

Write technical specifications faster- It is essential to establish a universally recognized set of technical standards and operating procedures for AI audits in the audit industry. The guidelines should embrace the entire life cycle of AI systems development, deployment, maintenance and auditing. Technical standards and operating procedures for AI audits could be developed by having audit authorities and industry associations collaborate with academia, technology providers and auditing professionals to facilitate the sharing of best practices. Auditors have to "improve internal quality controls to ensure that AI audit activities meet established auditing standards and internal control principles". As well, auditors have to be familiar with AI technology in order to effectively utilize the tools and assess the results. The audit report has to describe in detail how AI technology functions and what it can and cannot accomplish. Also, the "oversight of AI audit activities has to be increased to ensure that AI tools and technologies utilized in the audit process comply with the latest laws and regulations". Establishing cooperation among nations and establishing universal technical requirements for AI audits at a worldwide level are two ways to address the problem of inconsistent technical standards. International audit organizations and multinational audit firms can collaborate to foster mutual recognition and the alignment of auditing standards across diverse countries and regions.

Pay attention to how technical staff are trained- The auditing field is currently missing people who know both technology and auditing. To develop multidisciplinary skills in data analytics, machine learning, and auditing, auditors must partner "with higher education institutions to design and implement educational and training programs specifically for AI auditing. Second, to better understand and use AI technology, audit professionals who are already working are encouraged to take professional training and continuing education, especially in the areas of data processing, algorithm comprehension, and audit software tool usage. To get specialists in computer science, information technology, and data science to join the audit team and make audit work more professional and creative through collaboration with people from different fields, audit institutions should set up ways to find and reward talented people". Additionally, by giving young professionals practical experience through internships, apprenticeships, and mentorship programs, the audit profession can hasten their development. Auditors and their teams need to develop knowledge sharing platforms that will enable them to communicate and learn from one another on AI technology. As well as providing an enhanced user experience, it is essential to ensure that users are able to access and utilize AI audit tools. It would be beneficial if barriers could be removed that would prevent auditors from using AI technology. The audit sector needs to continue to participate in international exchanges of information and identify areas in which there have been successes globally in developing and utilizing AI audit skills.

CONCLUDING REMARKS- To provide a greater understanding of the risks and benefits of using AI in auditing, this article provides a comprehensive overview of AI as it relates to auditing, examines its advantages and disadvantages, and provides recommendations. The three primary forms of artificial intelligence (AI) -- machine learning (ML), natural language processing (NLP), and big data analytics (BDA) -- are highly beneficial for enhancing the efficiency and effectiveness of auditing processes. These forms of AI enable auditors to automate the process of collecting and analyzing data, clean and analyze data, assess the risk involved in an audit, and therefore allow them to spend more time assisting clients with decision-making and strategy development. However, there are many risks associated with the adoption of AI. The risks include the issues related to data bias and lack of transparency into algorithms that were developed through "the use of AI". The greatest risk of using AI is the impact that it will have on data privacy and security. "Due to the fact that AI systems" are essentially 'black boxes', they make auditing more dangerous than it would otherwise be. Furthermore, the lack of uniformity and consistency in the auditing process when it comes to AI, and the corresponding lack of standardized rules and guidelines for the auditing industry as it relates to the use of AI, is another major problem that must be addressed. As AI continues to advance and become increasingly complex, auditors will need to develop additional expertise in machine learning and advanced data analytics in order to maintain their ability to effectively perform audits.

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In order to address some of the identified issues, several solutions are proposed. First, auditors must establish strict controls over the management and protection of data. They must ensure that data is protected from unauthorized access and comply with applicable data protection regulations. Second, the auditing industry must take steps to improve the quality of data processing and analysis. It must also implement measures to improve the review and understanding of AI algorithms. Third, the auditing industry must ensure that the output of AI systems can be reasonably evaluated and validated. Fourth, in order to improve the uniformity and legitimacy of audit work, the auditing industry must develop uniform and legitimate standards and operational guidelines for AI-based auditing. Fifth, to assist auditors in improving their knowledge and utilization of AI technology, the auditing industry should focus on developing the technical skills necessary to utilize AI technology. Finally, the auditing industry must collaborate with academia to develop educational and training programs specifically focused on AI-based auditing. In order to properly manage and mitigate these dangers while taking advantage of AI's ease, future research and practice must continue. Although there are many obstacles to overcome, the use of AI technology in auditing is encouraging. The audit sector may fully benefit from AI technology while lowering its possible dangers and moving audit work in a more intelligent and efficient path by implementing appropriate countermeasures.

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