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RESEARCH ARTICLE

AI FOR AI AUDIT - THE VISION FROM LEGACY AUDIT TO MULTI LAYERED ARTIFICIAL INTELLIGENCE IN AUDITING

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Abstract

This paper investigates the prospects and difficulties of applying AI in the audit field. It explores the possible benefits of AI in enhancing audit processes, alongside adoption concerns, and provides a rare glimpse into its future evolvement and opportunities. To ensure comprehensive analysis, we applied an innovative multidimensional approach, implementing exploratory viewpoints through a new AI-Audit evolution framework, including a forward-looking perspective. The analysis includes implications applicable for audit professionals and the audit ecosystem, offering a holistic view that goes far beyond mere technical issues. AI holds the potential to transform auditing by improving the effectiveness and quality of audit processes while reducing costs and streamlining operations. However, we emphasize the need for empirical evidence to gain a deeper understanding of AI's broader impact on enterprise outcomes, particularly for its future evolvement. Unlike other only exploratory reviews, we introduce an innovative concept of "AI for AI-Audit," proposing an encompassing layer on top of current AI-based auditing tools. This new vision extends beyond contemporary practices that mimic human-like auditing, suggesting a more integrated AI system to improve contemporary audit outcomes. Alongside these advantages, we point to the necessity of empirical research to reassess AI's impact on audit quality and the overall transformation of the audit field, where ethical concerns and human oversight remain critical. While AI can significantly enhance auditing procedures, streamline processes, and affect audit-related costs, its adoption requires careful ongoing ethical monitoring. Finally, AI transformation in auditing raises questions about future auditor roles and the ethical implications of reduced human oversight, making compliance with ethical standards and maintaining human involvement essential.

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Introduction:-

Auditors commonly have the reputation of being the watch guards of corporate governance, acting as gatekeepers of financial reporting. But the fear is that, with the amazing speed at which artificial intelligence (AI) is making its way into our lives, the auditing profession may not be around for long. The pressing concern is that robots could completely wipe out human auditors and make them redundant. However, there are also those who think that AI has simply hit the top of the typical hype cycle that accompanies all new technologies. In that sense we are beginning to see the end of this hype. From their point of view, AI is in the phase of disillusionment, in which it has not yet fulfilled its high expectations. It is likely that the next stage will introduce a more realistic integration of AI into the business world (Bahodirovich, 2023).

Digitalization and corporate growth are making manual auditing almost impossible. An eventual shift to the use of cognitive tools by auditors is only a logical progression. Researchers are examining what this could mean for the auditing industry, which is also not currently AI-driven. The automation of audit tasks and the ability to analyze entire data sets makes traditional sampling methods outdated, inefficient, and cumbersome (Byrnes et al., 2018). AI based tools can examine every single financial transaction in a typical business to identify patterns and anomalies that traditional methods would miss. More precise and consistent audit results may be gained from this comprehensive examination (Mitan, 2024).

Having said that, AI is soon to revolutionize the auditing profession, but it is not expected to replace human auditors. Rather, it will augment their capabilities, resulting in better, faster, and more complete audits(Abdullah &Almaqtari, 2024). The incorporation of AI into auditing will lead to massive changes and improvements in the profession, such as automation of routine tasks, augmented improved data analysis, superior fraud detection, and new skill sets among auditors (Hasan 2022). The impact of these developments is significant and promises to provide much higher quality audits that are far more reliable, thus supporting the entire financial ecosystem.

This manifesto will address the understanding of both benefits and challenges of AI adoption in auditing such as what are the advantages of using AI to improve audit efficiency, effectiveness, and quality. We also discuss debates surrounding implementing AI, how AI is impacting the audit process, how it impacts auditor roles, and its ramifications to fees. This will additionally emphasize the importance of obtaining empirical evidence to measure the effect of AI on firm outputs and audit quality. We also highlight how AI represents a transformative capability for the auditing and financial services industries, and ultimately a need for navigational guidance in considering the ethical dimensions of development as well as appropriate human oversight.

Finally, we discuss the unique potential of AI in auditing. Automated audit tests that mimic the calculations of the original code would indeed be susceptible to falling into the same trap as the original software since they are essentially performing a similar computational process. AI-based auditing, by contrast, does not have to repeat the calculation process. That way, it can concentrate on the final outcomes of the process and evaluate whether they make sense based on its input data or other items within the evaluated population. Any discrepancies or anomalies can then be flagged for further human scrutiny.

Method:-

This conceptual paper has both theoretical and practical importance related to the impact of AI adoption on accounting and auditing practices. To ensure comprehensive analysis, we applied a multidimensional approach, implementing exploratory view based on inclusion/exclusion viewpoints, a new framework for describing audit evolution including a forward-looking perspective (See Figure 1):

- **Exploratory view of contemporary AI adoption** - This exploratory view obtains data from secondary sources such as academic journals, business reports, and government publications. Our research starts with a literature review across multiple databases such as Google Scholar and JSTOR to identify important works. This data is then analyzed, drawing on a broad range of related themes to represent the subject through a qualitative analytic process. These viewpoints include AI's consequences and implications for the audit profession, looking at aspects of regulation and supply and demand, and their effect on auditor roles. It also examines AI's influence on audit quality and cost-effectiveness ratios, addressing ethical considerations such as data privacy, algorithmic transparency, and the necessity for new auditor skills, providing a holistic view that goes beyond mere technical benefits.

- **A new framework for describing Audit Evolution -** Following this methodology, the study seeks to create a detailed and nuanced view of AI's audit evolution, leading to a new forward-looking perspective. Adopting this framework, we consider the evolving landscape of auditing with AI and future research directions. This view would shed light on the contemporary state of AI in auditing as we know it today and reveals hints about its potential opportunities, but also the challenges.
- **A new concept with a forward-looking perspective -** Based on these viewpoints and our new evolution framework, we present a new concept of AI for AI Audit. Looking to the future, we expect the emergence of a new generation of Audits—AI for AI Audit—where one type of AI model assesses the audit results generated by another type of AI model. This new concept operates as an additional, independent layer for monitoring previous audit results.

Fig.1:- Audit Evolution Framework.

Related Work - Contemporary Looking Perspective:-

In the next chapter, we examine the key trends associated with the contemporary evolution of auditing. Our review will primarily focus on AI applications in auditing, whereas previous studies mostly concentrated on the earlier non-AI implementations, which were pertinent to the periods during which those studies were conducted.

AI Transforming Auditing Profession

Accountants and auditors increasingly rely on Robotic Process Automation (RPA) to automate routine tasks like analyzing transactions and account fluctuations (Tiron-Tudor et al., 2024). The next steps will involve transitioning to cloud-based accounting systems and automating data entry processes. While AI in auditing is unlikely to replace the profession, it will change the approach by automating low-value tasks, enabling auditors to focus on high-risk areas and strategic decisions (Agnew, 2016).

The technological evolution may transform the auditing profession from a reactive to a proactive stance, adopting a continuous and real-time approach rather than conducting most work after the accounting close of organizations (Ghanoum & Alaba, 2020; Issa et al., 2016). An example of this transformation is AppZen's AI technology, which enables companies to audit expenses in real-time, identifying errors and fraudulent expenditures. Alerts generated by the system can be reviewed by internal teams or external auditors, minimizing the year-end testing required for related accounts and transactions (Kayser &Telukdarie, 2023).

Looking ahead, super AI, which performs tasks beyond human capabilities, is poised to revolutionize auditing. It can rapidly process vast amounts of data, identifying patterns and anomalies that may escape human detection. The advancement of super AI offers many benefits but also presents risks by potentially reducing the need for human auditors and diminishing their professional relevance (Efe, 2023).

Even so, looking forward, it’s somehow difficult in the short term to see AI integration — and there are all kinds of challenges to it — but it’s clear that AI is going to be a game changer for auditing in the long term. This technological shift will leave auditors needing to be technology-savvy and develop new skillsets. AI enables

industry to deliver more accurate, faster, and better audit outcomes for all stakeholders in the financial ecosystem, thus making it a win-win for everyone.

Training and Skill Development for AI in Auditing

However, the work of auditors is expected to change drastically with AI and will require new capabilities that will allow them to effectively engage with these systems and understand their outputs. Specialized training in data analytics, AI fundamentals, and cybersecurity will be crucial, necessitating revisions to academic curricula and workplace training programs. Moreover, continuous professional development should prepare auditors to address these challenges, ensuring that AI technologies used in audits are harnessed to achieve better audit quality and efficiency by focusing on three dimensions: processing Big Data, knowledge of machine learning algorithms, and managing the decision-making process based on AI insights (Anica-Popa et al., 2024).

It also calls for prioritizing specialized inter-disciplinary skills in accounting, technology and ethical dimensions. Issues related to ethics such as data privacy, algorithmic transparency, and bias should be covered, so that auditors who use AI can fully grasp their implications. This knowledge will empower them to use AI tools effectively and govern their deployment responsibly.

In addition to learning all the technical sides of things, one needs to learn soft skills such as critical thinking, adaptability and continuous learning. It is important for auditors to be knowledgeable about AI developments and modify their approaches accordingly. Academia, professional organizations and the audit industry have a role to play in working together on designing training programs that cover all aspects where AI can augment auditors' efforts as long as the integrity and quality of audit are not compromised.

Ethical Considerations, Regulatory and AI in Auditing

Ethical issues are related to the use of AI as an instrument for auditing, such as data confidentiality and transparency in algorithmic decisions (Mugwira&Fotoh, 2023). However, we recommend never compromising data security or privacy in the name of AI. Over-reliance on predetermined algorithms could reduce human oversight, making mistakes or biases more difficult to spot. The learning capability of AI may drift from organizational objectives and goals (Efe, 2023). Without comprehensive guidelines, it is likely that discrimination will occur, and auditors should regularly check AI for bias while updating the algorithms to remain objective (Syed & Deakin, 2020).

For organizations, trust is key for transparency in their AI processes and to ensure that they can make informed decisions. Auditors should detail the process AI systems use to reach a conclusion, enabling clients and stakeholders to fully understand how these decisions are made. The benefits of AI aside, when it comes to the latter, there are also some ethical implications that need to be accounted for. Ensuring ethical guidelines, transparency, and continuous AI-monitoring can ensure objective and responsible use.

With user expectations increasing, this expectation gap in auditing may grow (AICPA, 2020). Regulators must ensure auditors can accurately extract and analyze data to reflect true financial positions (Agnew, 2016). However, reliance on AI has its own hazards, including hacking or data manipulation (Schreiber & Schreiber, 2024). All auditors should be held to increasingly strict cybersecurity standards for their own and their clients' systems. To stay ahead of potential legal liability or financial damages, public companies are required to report significant concerns — such as cybersecurity threats. Moreover, A recent judgment against PWC for failing to detect fraud has intensified scrutiny on auditor liability (Johnson & Schroeder, 2019); the accountability for fraud detection falls more on auditors, who must reveal high risks of fraud in clients' accounts.

As the adoption of AI progresses, regulators need to ensure that AI tools act in an ethical manner, following data privacy and transparency guidelines. A combination of well-thought-out regulatory frameworks, stringent cybersecurity measures, and thorough education for auditors, are vital for ensuring AI benefits, while minimizing risks, maintaining audit integrity, and safeguarding stakeholders' needs.

AI implications on Supply and Demand

Audit fees are determined by both demand- and supply-side elements. On the demand side, elevated fees have been associated with the board’s or audit committee’s independence and expertise (Engel et al., 2010). On the supply side, fees often represent audit quality, the effort put in by auditors, and the inherent risk posed by the client

(Caramanis&Lennox, 2008). Audit efficiency also affects fees, with Abbott et al. (2012) noting that outsourced internal auditors can reduce fees due to perceived efficiency and independence.

Fedyk et al. (2022) investigated audit fees as an indicator of operational efficiency. The integration of AI may improve efficiency by automating proccesses, reducing labor hours, and providing deeper insights, potentially lowering audit costs. However, cost savings might be offset by initial AI investments and ongoing maintenance. Audit firms might reinvest savings into AI enhancements instead of reducing fees.

Moreover, AI adoption could also shift supply and demand dynamics, increasing demand for auditors with advanced technical skills, potentially leading to higher compensation for these auditors. This shift could impact the overall structure of audit fees.

While AI has the potential to improve efficiency and reduce labor costs, its impact on audit fees depends on how firms leverage savings and the evolving demand for specialized skills. AI integration in auditing could significantly change supply and demand dynamics, influencing audit fees and the broader economics of the profession.

AI implications on Audit-Cost Effective Ratio

According to Austin et al. (2021), the impact of technology on audit fees introduces a tension between auditors and clients. Clients feel that fees should decrease as auditors adopt more advanced tools such as AI, while the latter argue for higher pricing due to the significant upfront investment required (and delayed efficiency gains). Fedyk et al. (2022) provides similar insights, noting that customers anticipate lower costs due to efficiency gains when AI is used, while auditors highlight the higher initial outlays and time required before such benefits can be realized.

This tension emphasizes the intertwined nature of audit fees and AI adoption. While AI can significantly reduce auditors' time waste, improve accuracy, and provide deeper insights when auditing, it will not do so immediately. Audit fees will need to account for the high initial investments in AI and ongoing maintenance costs. The use of AI in audits will certainly make the process more efficient, but with evolving technology, its viability as a cost-effective measure is not yet known and needs to be closely monitored.

Although AI offers the promise of improved audit efficiency and lower costs, to what extent this translates into reduced fees is yet to be seen. For one, continued spending on AI infrastructure and delayed efficiency improvements make direct cuts to fees difficult. Finally, the interplay between these two forces in auditing — technological progress and cost-cutting incentives—will undoubtedly continue to evolve. This dynamic underscores a critical avenue for future research, as further empirical analysis is needed to uncover its full consequences.

AI Impact on Audit Quality

Empirical research on how AI affects firms' output quality and efficiency remains limited (Fedyk et al., 2022). A significant challenge is the lack of firm-level data to quantify AI adoption within companies (Seamans and Raj,2018). The effects of AI vary across professions and industries, leading to industry-specific outcomes.

Despite these concerns, AI's rapid adoption across sectors shows its transformative potential (Akhtar, 2024). Early indications suggest AI can enhance audit accuracy, efficiency, and reliability by analyzing large datasets and identifying anomalies, leading to more precise audits and reducing errors (Abdullah &Almaqtari, 2024).

Continuous monitoring and research on the influence of AI in auditing are necessary. As AI matures, follow-on research will provide guidelines for the effective use of AI and examples to help avoid potential pitfalls. Initial signs are encouraging and, while more empirical evidence is required, AI appears to have an ability to play a role in enhancing audit processes. Thus, broader research will still be needed to ensure that quality improves significantly in the audit process across industries.

The New Framework - Audit Evolution and AI Unique Benefits:-

The development of technology worldwide has challenged the field of auditing to evolve alongside it for the past decade. Initially, this included semi-automatic or local mechanization of actions. We call it generation 1- **Non-AI/Non-RPA Legacy Audit**. It was followed by generation 2 - **RPA (Robotic Process Automation) for Audit** which includes the implementation of bots/robots to fully automate processes instead of manual activities. With the emergence of AI, there has been a gradual shift towards using it for effective automation, exception analysis, and

freeing up human experts for insights which has yielded generation 3 - **AI for Audit**. The future as we see it will move towards independent AI engines as a separate layer on top of the previous layers to enhance the cognitive capabilities - generation 4 - **AI for AI Audit** (See Figure 2).

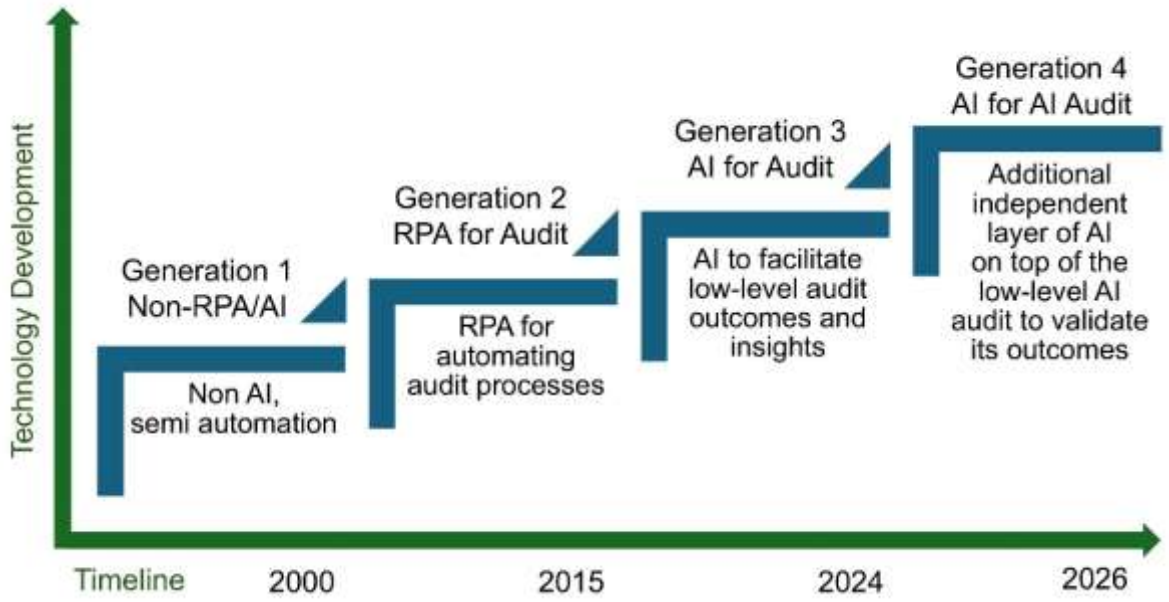

Fig. 2:- AI Audit Transforming with TechnologyDevelopment.

In the current era of RPA for Audit and AI for Audit (generations 2, 3), we see a huge opportunity to significantly increase productivity. The application of AI in the audit process provides countless benefits that dramatically improve the quality and efficiency of audits. AI can also help reduce human fatigue caused by the repetitive analysis of organizational data, as found in a study by the American Institute of Certified Public Accountants (AICPA). With the ability to process terabytes of data, these tools can identify patterns and relationships, as well as outliers or exceptions that may not be immediately apparent to human auditors. Nevertheless, it is essential to note that the professional knowledge and experience of auditors are still required to assess the accuracy and material relevance of AI-generated results within the overall audit context (AICPA, 2020).

Through AI, auditors can dedicate an extra level of resources to intricate areas and explore potentially unusual elements that could improve opportunities for using critical thought and professional judgment (Nunes et al.). This transition allows the auditing profession to reach top-notch levels of quality, efficiency, and effectiveness, leading to a good cost-benefit ratio (Issa et al., 2016).

The audit profession is already striving to evolve AI to the next generation. AI tools are being developed by firms to address the increased demand for audit technology that matches the complicated systems their clients use and can manage all the data auditors need to process. KPMG, for instance, teamed up with Microsoft to jointly develop an intelligent audit platform called KPMG Clara. This platform is aimed at building and accelerating the cognitive capabilities of AI in auditing processes, representing the profession's commitment to advancing AI technology (Satyawan &Iswati, 2023). The above would be an important step towards generation 4 of AI for AI Audit.

The New Concept - AI for AI Audit Vision:-

Looking ahead, the emergence of super AI (Efe, 2023) and the increase in global computing resources make AI applications more accessible. The use of accelerator cards and specialized processors allows private firms, not just government organizations, to run these applications. This development will advance the fourth generation of AI applications in auditing.

We begin with our vision to the unique contribution of AI for the field of auditing – **AI for AI Audit**. Automated tests that mimic the calculations performed by the software under review (mostly deployed by audit implementations

of generations 1 to 3) might fall into the same trap as the original software since they essentially run a similar computational process. In contrast, AI-based auditing does not need to repeat the calculation process. Instead, it can focus on the final outcomes of the process and assess whether they make sense in respect to the input data or other items within the population. If any discrepancies or anomalies are detected, they can be flagged for deeper human investigation.

For example, when verifying the accuracy of payroll slips, AI **generation 4** implementation can identify inconsistencies such as an unusual high salary for a young, single employee compared to peers, an excessively high health insurance premium despite of the employee being young, with no dependents, or the implausibility of accounting for many years of seniority starting from the age of ten (See Figure 3). This approach ensures a more intelligent and context-aware audit process. We refer to these capabilities as the next generation of AI for Audit, beyond the common uses of enhancing accuracy, effectiveness, and automation of processes through AI (Previous generations).

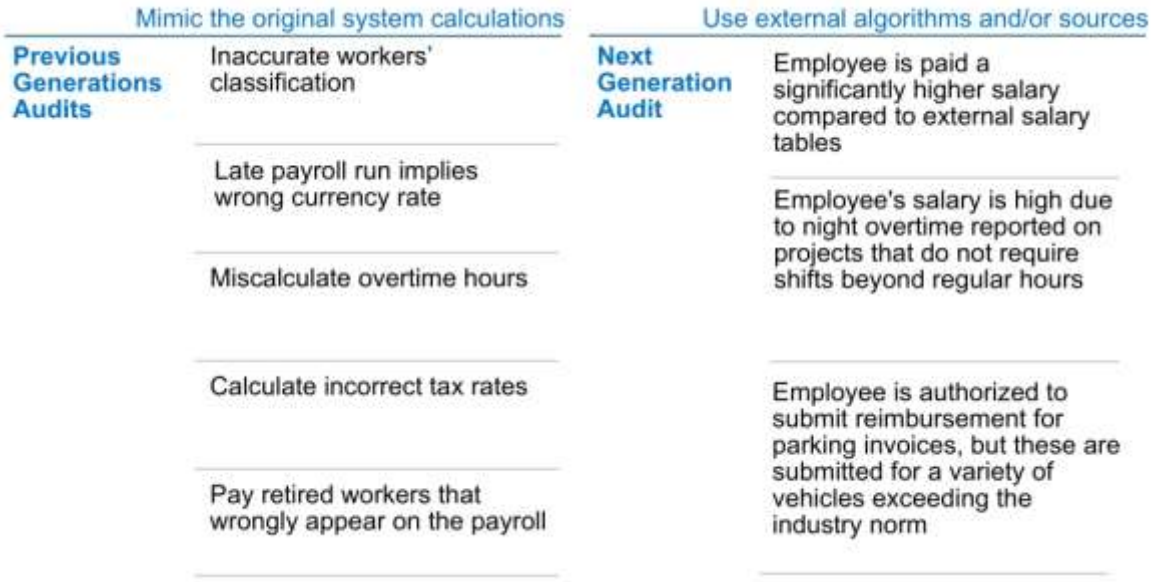

Fig. 3:- Generational Salary Gap in Audits.

According to this innovative concept, **AI for AI Audit** (depicted in Figure 4 as level 4) serves as an additional and independent layer for overseeing the initial audit outputs (either previously deployed in a manual way, by RPA or by AI - depicted in Figure 4 as levels 1 to 3 accordingly). Furthermore, even if the initial audit outputs are produced through AI automation (depicted in Figure 4 as level 3), a different AI model, that uses both external and internal sources (see "AI for AI engine" and "External knowledge" and "Input" frames) can be applied in level 4 to verify these previous audit outputs. For example, AI at level 3 can utilize the 'ChatGPT 4o1' model, while AI for the AI engine at level 4 will observe its output using the 'Claude 3.5 Sonnet' model, which shows wide-ranging improvements on industry benchmarks in problem-solving (Anthropic, 2024). This model, in some tasks such as comprehension and classification abilities, error analysis for improvement, logical reasoning, and adherence to guidelines, consistently outperforms OpenAI's latest models (Jin et al., 2024; Park et al., 2024).

Furthermore, working with two layers of AI auditing enables the modification of model parameters to minimize the risk of potential biases caused by hallucinations (Athaluri et al., 2023). This approach allows for different levels of operational flexibility across the audit layers. For example, at the internal audit level, a higher temperature (e.g., 0.5 to 1) can be set, enabling greater creatively in processing materials under review. In contrast, at the external audit level, a lower temperature (e.g., 0) can be set for stricter adherence, ensuring more rigorous oversight of the internal layer's outputs. This approach enables a combination of creativity and strictness in audits, leading to higher-quality final audit outcomes. Beyond this, the external layer can enhance transparency by documenting modifications or additions made and presenting them for human auditor review.

In addition, the process may utilize external data sources such as tables published by statistical authorities or even raw 21w generation of Audits - AI for AI Audit, where one type of AI model checks the audit outputs generated by another type of AI model.

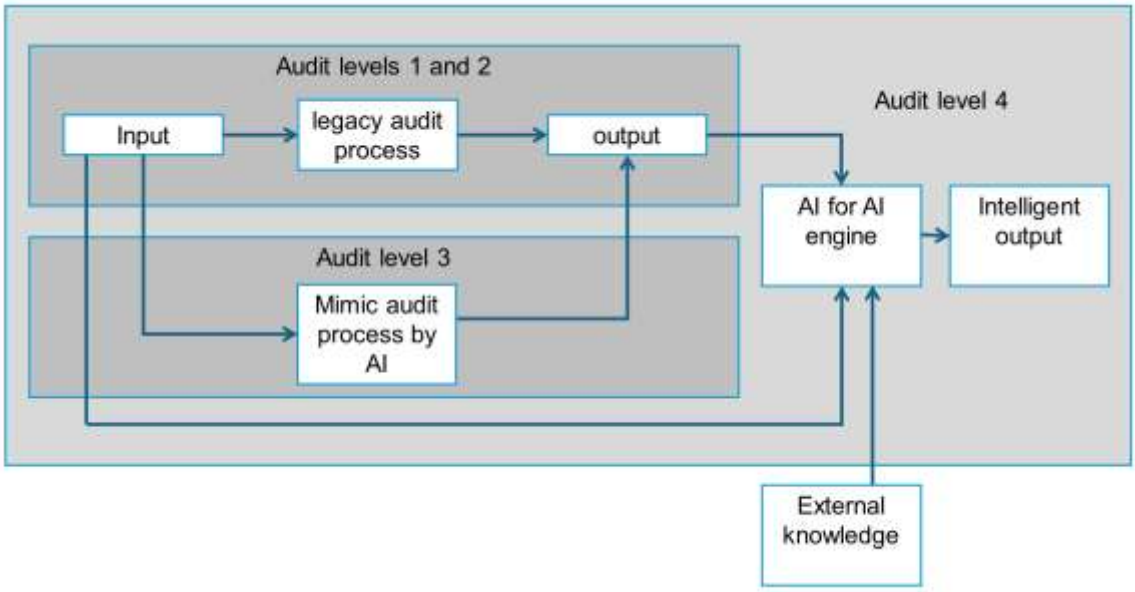

Fig. 4:- AI for AI process.

Discussion and Conclusion:-

The emergence of advanced AI language models like ChatGPT marks a pivotal shift with profound implications across industries, including auditing and financial services. Their versatile general capabilities to understand and generate human-like intelligence have immense potential to augment and automate complex processes like auditing, financial reporting, and regulatory compliance.

While legitimate concerns around bias, privacy and human oversight must be addressed, we believe the benefits of responsibly integrating this transformative AI capability outweigh the risks. The productivity gains and acceleration of human intelligence could be tremendous economic drivers. This AI renaissance presents both immense opportunities for those who can successfully adapt and leverage these technologies, as well as disruptive threats to those who fail to evolve. Auditing and finance firms able to thoughtfully harness AI's power could reap competitive advantages and efficiencies.

Ultimately, as AI models become increasingly capable at comprehending, analyzing and generating human-like intelligence at scale, their impact on knowledge-centered sectors like auditing and finance is likely to be utterly transformative in the decades ahead. These industries need to carefully and responsibly integrate AI to unlock its full potential.

Practical implications

However, the advent of artificial intelligence (AI) into the auditing profession has multiple real-world implications that can greatly improve audit processes. For example, AI-driven tools can easily automate the repetitive work of data entry and transaction matching/reconciliation — so auditors will free up to focus on more complex and judgmental areas of their work. This automation will result in a lot of savings and increased productivity. AI also improves the precision and efficiency of audits by offering real time analysis for looking at a larger set of data, compared to older methods that could only analyze sample sized data. It also helps in improving the overall quality and reliability of audits by detecting anomalies, patterns or trends that would otherwise be overlooked with traditional audit testing.

AI also helps strengthen risk assessment and fraud detection. It has the capability to continuously monitor financial transactions and apply machine learning algorithms to highlight irregularities or anomalies that may lead to potential

risks such as fraudulent activities. It is essentially a way to catch irregularities, making audits more effective and ensuring accurate auditing without misstatement of financial entries. A corollary of this also impacts audit fees, as implemented AI can be expected to increase the speed and ability to perform during audits, potentially trickling down into cost savings for both auditing companies and their clients.

Social implications

Clearly, the use of AI in auditing — especially now with a new wave of next generation **AI for AI Audit** — presents various social issues related to the human workforce and the role of human auditors. While AI can provide a significant boost to audit efficiency and accuracy, there is a legitimate concern that it may break the barrier for widespread job loss or could displace traditional roles associated with auditing. Instead of displacing professional human auditors, AI is probably more likely to augment their capabilities, assisting them in concentrating on higher value tasks, such as those related to judgement, critical thinking and ethical. This part of the audit involves planning, testing design and implementing internal controls as well as performing follow-up tests in response to work done during the audit. These tasks for which expert judgment is key are unlikely to be fully automated in our lifetimes. Until technology can make consistent, principles-based decisions on its own, human experts remain irreplaceable.

Such technological transformation means a change of skill set required for auditors. Colleges, universities and certifying institutions will have to modify their curriculums to account for training in data analytics, AI fundamentals and cybersecurity. This is crucial to ensure that future auditors are prepared to work alongside AI systems and can interpret their outputs correctly. Ethics considerations are also required for using AI to its full potential in auditing—from data privacy to model bias and transparency in AI decision-making for auditors. In order to gain public trust and acceptance regarding AI–driven audits, it is essential that auditors practice appropriate human oversight and maintain ethical standards.

Limitations

Despite the many benefits of using AI for auditing, there are several constraints and issues that should be addressed. The most important shortcoming is that there has been very little empirical work to date on how AI might influence audit quality and firm outputs over long periods. While there has been theoretical and anecdotal evidence to suggesting potential benefits, rigorous empirical studies that could help verify these claims and more accurately describe the extent of impact remain elusive.

Another limitation worth mentioning is the algorithmic bias and errors in AI systems. With the use of AI, results can only be as good as the data it uses, and biased or incomplete datasets can deliver flawed conclusions or overlook risks. To ensure accuracy and reliability, AI tools must be continuously monitored, tested and validated. Furthermore, Introduction of AI in auditing demands massive investment involving technology infrastructure and training. However, different audit firms and especially smaller ones with insufficient resources, might struggle implementing AI which in turn may cause a digital divide among auditors.

Disclosures such as bank reports or other regulatory reports. need to be adequate, and auditors are responsible for ensuring their accuracy. For instance, when audit firms and their clients move toward cloud technology or automation, it will make AI algorithms hackable so that financial statements are manipulated for asset misappropriation (fraudulent reporting).

Future Research:-

Future research in the integration of AI in auditing should focus on several key areas to provide a deeper understanding and address existing limitations. First, empirical studies are needed to assess the long-term impact of AI on audit quality, efficiency, and firm outputs. These studies should explore various AI applications in different auditing contexts and industries to provide comprehensive insights including Super AI long-term potential implications.

This encompasses the unique potential of AI for Auditing, as outlined in our vision for its transformative impact. We envision it as an independent layer that oversees initial audit outputs and utilizes various AI models to verify the initial AI-generated audit results. The emergence of **AI for AI Audit**s, where one AI model checks the audit outputs produced by another AI model, will ensure a robust and multi-layered audit process. This vision underscores the importance of investigating and developing these unique capabilities of AI to enhance and innovate auditing practices.

Research should focus on the ethical implications of AI in auditing, addressing concerns like data privacy, algorithmic bias, and transparency. It should also cover the emerging use of **AI in AI audit**s, assessing potential ethical issues with multi-layered AI systems, especially interactions and the effects of biases. Developing ethical guidelines for the next generation of AI use is crucial to alleviate public concerns and ensure responsible deployment. Further studies should also investigate the skill sets required for auditors in the AI era to guide educational and professional development programs.

Finally, Exploring AI's potential to enhance specific audit processes, like risk assessment, fraud detection, and compliance monitoring, can provide valuable insights into practical applications. Research in these areas can identify best practices and develop methodologies for integrating AI into auditing.

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