USE OF ARTIFICIAL INTELLIGENCE IN ACCOUNTING - PRESENT AND FUTURE PROSPECTS AND CHALLENGES

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ABSTRACT

Introduction- Artificial Intelligence focuses on building systems that simulate human cognitive abilities, including learning from data, reasoning and solving problems. AI in accounting shifts the burden of accountants from data and problem-solving. In accounting, use of AI helps reduce manual errors in calculations, data entry and reporting, leading to more accurate financial records. This supports businesses in moving data entry to analysis, planning and client consultation. The future of AI may lead to advanced forecasting system and smart solutions which would help the accountant professionals to focus more on planning, analyzing and providing accurate reports leading to better decision making. There are various big accounting firms like Deloitte, Ernst &Young (EY) etc. as well as small and medium sized firms using AI to stay competitive and provide better services not only abroad but also in India.

Purpose- The purpose of this study is to explore how AI is currently being used by accounting firms and to examine the potential and challenges associated with this implementation.

Methodology- The data collected for this paper was from secondary sources. Extensive literature survey was done to come to a conclusion which shows the use of AI by all the different types of accounting firms.

Findings-The findings of the study revealed that the use of AI is confined mostly to larger firms. Apart from the benefits there are some challenges which hinder the use of AI by all the different types of accounting firms.

Research Limitation- The study is based on secondary data. The research can be extended not only to the accounting firms but also to various fields such as in business, policy and law, healthcare and education etc.

Practical Implications- As AI automates routine accounting task for peak efficiency, it will fundamentally redefine the roles and capabilities of modern accountants. Accounting Professional anticipates that AI significantly can transform the accounting industry.

Originality/Value-Though the study is a secondary data based yet extensive literature review was done to find out the present scenario of AI in accounting. A gap is recognized in acceptance of AI by different accounting firms which may be a matter of concern for future. Some conclusions are drawn which says reduction in such gap can add up to the transformation of Accounting Industry.

Keywords: Artificial Intelligence, Accounting, Human intelligence

Introduction

Artificial Intelligence refers to the development of computer systems that can perform task that usually require human intelligence. This task includes learning from data, recognizing patterns, understanding language, reasoning and making decisions. AI relies on processing massive amounts of information through algorithms rather than possessing human consciousness.

Common underlying technologies include:

- Machine learning: Systems that learn from data and self-improve without explicit programming.
- Deep learning: A machine learning subset using layered neural networks that mimic the human brain.
- Natural Language Processing (NLP): Algorithm engineered to process, interpret and generate human language.

AI generally is broken down into three main classifications:

1. Artificial Narrow Intelligence (ANI) - This is the most common form of AI today. It is designed to handle specific tasks (e.g. Image recognition, chatbots, chess–playing algorithm.

2. Artificial General Intelligence (AGI) - This is a theoretical form of AI that would have ability to perform any intellectual task that a human can do.

3. Artificial Super Intelligence (AGI) - This is a theoretical concept where AI surpasses human intelligence and capability in all aspects.

AI in Accounting

Manual errors in calculations, data entry and reporting are significantly reduced through the use of Artificial Intelligence. It ensures that rules are applied consistently and automates the reconciliation process. With real-time data validation and pattern recognition. AI tools can detect anomalies and highlight inconsistencies at an early stage. This leads to more reliable financial records and better compliance, allowing businesses to make accurate and well-informed financial

decisions. The role of accountants may evolve to focus more on analysis, planning and client consultation. However, AI is expected to complement professionals rather than replace them. The future of AI in accounting involves deeper integration with real time data systems, advanced forecasting tools and smart compliance solutions. Accountants will transition towards roles that emphasize analysis, planning and client consultation.AI will support professionals by enhancing their capabilities and productivity.

AI in accounting involves the use of artificial intelligence technologies such as machine learning, natural language processing and predictive analytics to:

- Automate various tasks
- Analyze data like financial data such as transactions
- Provide insights that assist firms in making better decisions.

The top ways the firms are using AI

1) Client Communication
2) Content and Marketing Creation
3) Research and Technical Analysis
4) Quality Control
5) Data clean-up and analysis
6) Advisory support
7) Internal Documentation
8) Financial Reporting
9) Tax return preparation

Top 10 AI tools used by accounting firms:

- Chat GPT
- Microsoft Copilot
- Cloude
- Google Gemini
- QBO
- Blue J Tax

- Perplexity
- Karbon
- Dext
- Canva
- Digits
- Zeni
- Botkeeper
- Clear Finance cloud

AI handles repetitive tasks like:

- Drafting e-mails
- Categorizing transactions
- Generating reports
- AI responds to clients more quickly without losing context and it is essential that the response are context aware It can summarize conversations in seconds, extract key points, and help create responses that are both fast and accurate..
- AI powered tools reduce data entry errors, repetitive tasks and the risk of human mistakes.
- Augmentation over replacement-AI handles high-volume, repetitive tasks, while human accountants focus on judgment, strategy and interpretation.
- Reduce cost and improve efficiency-Firms adopting AI see significant efficiency gains in reconciliation and invoice management.
- Small to large businesses needing automated book-keeping and accurate real-time financial reporting.

Some of the firms are using AI tools in creative ways that go beyond the usual aspects:

- Canva: To generate branded social media graphics faster.
- Loom: To record video explanations, then feed the transcript into ChatGPT to draft standard operating procedures.
- Zapier: To create workflows that push data into project management systems automatically.

- Wispr: To generate meeting notes during advisory calls.

SAP FICO is one of the most widely used ERP systems for financial management. By integrating AI into SAP systems, companies can automate complex task like tax calculations, payment processing and even forecasting. For example – An Indian manufacturing firm used SAP AI extensions to reduce invoice processing time by 60%. Helps in standing out as a forward thinking firm- By using AI in accounting, it helps the firm to stand out and have advantage over others. The "Big 4" accounting firms- Deloitte, Ernst and Young (EY), PwC and KPMG- have led the way with AI adoption. They have heavily invested in AI powered tools and solutions to provide clients with more advanced and insightful services. Smaller firms also use AI to stays competitive and offer better services such as tax research, tax return preparation, tax advisory, accounting/book-keeping automation and document summarization. AI tools (e.g. for GST) assist in tax compliance.AI helps in 100% of transactions to detect anomalies, fraud and risk increasing accuracy in financial reporting. AI generates predictive insights for cash flow forecasting and business strategy. AI simplifies the sorting and analyzing of invoices and contracts.

Tools often integrate with Indian compliance framework (GST, TDS) and accounting software like Tally to streamline workflows. Gen AI adoption: Chat GPT is used for drafting emails and Generative AI for summarizing complex tax regulations. In India, AI used to automate high volume task like invoice processing, data extraction, bank reconciliation and tax compliance (GST/TDS) through platform and custom AI tools.

CA firms in India often use "plug and play" AI tools rather than developing custom software. Examples of some of the notable Mid-sized and Boutique Firms using AI are as below-

1. Kirtane and Pandit LLP-A prominent midsized firm that uses AI for transforming financial analysis and reporting.

2. G.K Kedia and Co. - This firm actively integrates cloud platforms and AI for automated GST reconciliation and anomaly detection.

3. Start–up khata- A Delhi based AI fintech firm that serves MSMEs in agriculture and logistics. They use AI for auto correcting accounting transactions and managing GST filing via Whatsapp.

4. Vishnu Acharya and Associates- Led by CA Vishnu Acharya, this practice uses custom AI agents on Telegram for automating client interactions, document collection and revenue certification requests.

Many small firms are using AI as a service to manage hundreds of clients without increasing staff. Some of the examples of such firms are-

- Vyapar Tax One (formerly Tax One) used by over 30,000 Indian Accounting professionals for automated document collection and real – time ledger error detection.
- Hello books -a platform used b boutique Indian firms to serve 3x more clients by automating bank feeds and generating GST ready– reports Zoho books and Tally prime- (with AI add-ons).These are the standard tools for small Indian firms to automate transaction categorization and GST pre-reconciliation.

Future Prospects of Artificial Intelligence

- AI automates repetitive task which allows the manpower to focus on creative, productive and strategic work.
- AI significantly contributes to healthcare sector also. It greatly helps in diagnose diseases, develop medicines and improve patient care.
- AI significantly helps the students in their studies, research and in-depth study of a particular subject.
- AI contributes towards business growth. Much of the work in Companies is done by the use of AI tools. AI used for data analysis, customer service and decision-making.
- AI accelerates the research field such as medicine, space exploration and climate science.

Challenges of Artificial Intelligence

- Use of AI may lead to job replacement requiring workers to learn new skills.
- AI system is concerned with handling large amount of data raising privacy issues.
- AI implementation cost in some medium to big companies may be much higher as they require some specifically designed tools.

- There may arise some ethical issues while implementing AI.

Objectives of the study

The objective of the study are-

1) To evaluate how AI is used by accounting firms big or small and how it is helping in error free work.

2) To study about the changes brought by Artificial Intelligence in accounting profession after its use in this profession.

Research Methodology

The data collected for this paper was from secondary sources. Extensive literature survey was done to come to a conclusion.

Statement of the problem

The purpose of this study is to provide an insight about how AI is used by the accounting firms in the present scenario and what are its prospects and challenges faced by it.

Research Limitations

The study is based on secondary data. The research can be extended not only to the accounting firms but also to various fields such as in business, policy and law, healthcare and education etc.

Review of Literature

Nandhini P, Sre Pooja K (2026) in their research paper **"A study on Impact of Artificial Intelligence on Modern Accounting Practices"** examined the impact of AI on modern accounting practices by analyzing its benefits, limitations. The research highlights how AI is shifting the accountant's role from traditional book-keeping towards strategic advisory functions. The study concludes that AI does not replace accountants but enhances their capabilities, making human expertise and technological knowledge equally essential in the future accounting environment. The study identifies the need for accountants and students to develop technological skills and knowledge to adapt to AI-based accounting environments. The findings conclude that AI will not replace accountants; instead, it acts as a powerful tool that significantly enhances professional capabilities.

Stratopoulos, T. C., & Wang, V. X. (2025) in their research paper "**Artificial intelligence and accounting research: a framework and agenda**" proposed a framework for understanding and navigating the rapidly evolving intersection of artificial intelligence and accounting research along two dimensions i.e. research focus (accounting-centric versus AI-centric) and methodological approach (AI based methods versus traditional method) through which the existing contributions identify under-developed research domains and position future inquiries strategically. This framework is applied to several papers and it reveals strong momentum toward AI centric research and active engagement in evaluating AI systems using traditional methods.

Piteara, R. (2025) in his research paper **"The use of AI in Accounting-Case Studies and Prospects for Implementation"** assessed the level of interest in adopting artificial intelligence solutions in accounting offices and corporate finance departments as well as to identify the main barriers and challenges affecting their implementation. It is found from their study that a small number of owners are considering implementing AI, although they are using some tools based on this technology. In larger companies, the percentage of those interested in implementing AI is higher. The study also revealed that there are some existing challenges in implementation of AI such as high cost of AI implementation, lack of sufficient technological knowledge and concerns about data security.

Altawalbeh, M. A., Al Frijat, Y. S., & Alhajaya, M. E. (2025). in their research paper **" Pros and Cons of using Artificial Intelligence in Accounting: The Dual Effect and Financial Control"** undertook an in-depth study about the influence of AI on such aspects as accuracy of accounting processes, speed of routine tasks, cost control productivity and fraud detection and prevention. The study concludes that AI plays a transformational role in enhancing accuracy, productivity, cost management and fraud detection by the process of automation and enhanced data analysis. But, still there are challenges like high implementation cost, special training requirements, data privacy and ethical issues related to the transparency of algorithms and their reliability.

Alqirem, R., Bader, A., & Alqtish, A. (2025).in their research paper **"The Impact of Artificial Intelligence on Accounting: A Topic Modeling Investigation of Digital Transformation and Emerging Technologies"** in their research explored the adaptability of the accounting profession

to emerging technologies the potential benefits and challenges of AI adoption and its impact on decision-making accuracy. The findings suggest that AI enhances efficiency, accuracy and predictive capabilities but also present challenges related to implementation, ethical concern and workforce adaptation. The study contributes to the ongoing discourse on AI's role in accounting, offering insights into the evolving landscape of digital transformation in the field.

Alruwaili, T. F., & Mgammal, M. H. (2025) in their research paper **"The Impact of Artficial Intelligence on Accounting Practices: an academic perspective"** established fundamental knowledge to investigate AI applications in accounting practices. This research delivers essential knowledge to investigate Artificial Intelligence applications in accounting practices. In order to prepare accountants for their changing duties the field requires pedagogical reforms that include teaching AI systems and teaching ethical principles (Alharasis 2024; Ballantine et al 2024).This study adds a better clarity to AI operational process through survey investigations. It is found from the study that AI acceptance differs substantially per cultural standards and economic system and technological capabilities. This study introduces both ethical and socio-economic implications. The research shows that AI technology serves both disruptor and enabling capabilities and transform Saudi accounting practices and local implementation strategies.

Aggarwal Dr. S. S.(2017) in his research paper **" The Influence of Artificial Intelligence on Modern Accounting Practices"** in his research paper examined how AI influences modern accounting practices highlights its opportunities and challenges and explores its implications for the future of the accounting profession. AI integration presents several challenges and ethical considerations such as cyber security threats, data privacy risk, algorithmic bias and high implementation cost continue to hinder widespread adoption.

Findings of the study

The findings of the study are based on secondary data. Extensive literature review was undertaken. The following are the findings of the study-

1) It is seen that a framework was applied to several papers which shows that people are more inclined to use and evaluate the AI systems.

2) It is also found that larger firms are using the AI tools more compared to the medium sized and smaller firms.

3) The major challenges which is faced by the accounting firms in implementing AI tools of accounting are the high implementation cost, cyber security threats, data privacy risk and algorithmic bias.

4) It is also seen that use of AI had led to the change of roles of accountants to more advisory functions.

5) To prepare accountants for their changing duties, educational institutions must implement pedagogical reforms that teach both AI systems and AI ethics.

Conclusion

- AI in accounting is now indispensable. Accounting Profession need the use of AI as it can eliminate the manual entry and tedious work of recording, summarizing etc. Companies are implementing AI in anticipation of improving productivity. AI driven automation will optimize efficiency and fundamentally reshape the accounting profession. Accounting Professionals anticipate that AI significantly transforms the accounting industry.
- The various accounting tools help in generating the error free results while reducing the human labour.
- AI is expected to change the nature of accounting work. The future prospect of the entry level jobs in accounting industry is a matter of concern.
- Accountants are considering AI to have a competitive advantage over other firms and increase the firm's value.
- Accountants significantly using AI in managing various tasks which requires repetition such as drafting e-mails, categorizing transactions, and generating reports in no time.
- The use of AI has led to automation of task, expense tracking and data entry by reducing manual work. AI provides instant financial reporting, cash flow analysis and 24/7 book -keeping.
- The errors and frauds are easily detected through anomaly detection.
- AI automates the tedious task of matching bank statement with integral ledger entries.

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