



Artificial Intelligence in Accounting: A Review of Technologies, Applications, and the Future of the Accounting Profession

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Abstract: Artificial Intelligence (AI) is a transformative technology that is changing accounting practices. This technology enhances accuracy and efficiency in the accounting field. It also helps in better decision-making. The evolution of Accounting has moved from traditional manual Record-keeping (Bookkeeping) to computerise accounting systems, then to cloud computing, and now to Artificial Intelligence. This change has affected how we record, process, analyse, and report financial information. Various AI technologies, such as Machine Learning, Natural Language Processing, Robotic Process Automation, Generative AI, Predictive forecasting, etc., are now being implemented in Accounting to automate routine tasks, improve financial reporting, strengthen audits, support tax compliance, and detect fraud. It focuses on Artificial Intelligence technologies, applications, challenges, and the future of the accounting profession." It is descriptive and based on secondary data collected from peer-reviewed research articles, books, professional reports, publications of leading accounting firms, and reports issued by professional accounting bodies. A thematic review method has been utilized to examine how to integrate the existing literature. The review shows that Artificial Intelligence has greatly improved the speed, accuracy, transparency, and reliability of accounting information System. It has also reduced manual effort and operational costs. At the same time, organizations face challenges relating to data privacy, cybersecurity, ethical concerns, implementation costs, and the need for continuous upskilling of accounting professionals. The study concludes that Artificial Intelligence should be seen as a tool that helps Accountants by enabling them to perform higher-value analytical and advisory roles. The findings of the study provide useful insights for researchers, accounting professionals, educators, business organizations, and policymakers on the growing significance of AI in modern accounting practices and its future potential to transform the accounting profession.

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Introduction

The accounting profession has gone through significant changes in recent decades due to advances in information and communication technology. In the past, Accounting relied on manual book-keeping, which required more human effort, time and accuracy. The advent of computerized accounting systems marked the initial technological shift. Along with computerized accounting, it is linked to ERP Systems (Enterprise Resource Planning), cloud computing, SAP, and digital financial management. It is complemented by Artificial Intelligence, which further distinguishes the accounting profession. These technological changes improve the efficiency, reliability, accuracy and accessibility of Accounting.

Evolution of Accounting

The accounting profession has changed over time in response to new technology and changing business requirements. In the beginning, accounting activities of business transactions in monetary terms were recorded manually, known as Book-keeping, which depended upon paper records and a lot of human work. The introduction of computerised accounting systems sped up accounting processes and made financial record-keeping more reliable. Then, organisations' ERP (Enterprise Resource Planning) systems integrated the accounting function with other business functions, enabling real-time information sharing and better organisational control. Furthermore, cloud accounting has changed how accounting practices are conducted by providing access to financial information. The concept of Cloud Accounting is to provide access to financial information at any time and from anywhere, enhance teamwork, and lower infrastructure costs. The next stage of development is 'Artificial Intelligence (AI)', which enables intelligent automation, predictive analytics, continuous auditing, fraud detection, and data-driven decision-making. Because of this emerging technology, the role of Accountant has shifted from routine transaction processing to strategic analysis.

Artificial Intelligence in Accounting

'Artificial Intelligence' means the ability of computer systems to perform tasks that require human effort and Intelligence. This includes learning from data, reasoning, problem-solving, language processing, and decision-making. Various business organisations adopt various AI technologies (including Machine Learning (ML), Natural Language Processing (NLP), Robotic Process Automation (RPA), Generative AI, Predictive Analytics, and Intelligent Document Processing), enabling accounting professionals to automate repetitive tasks and generate reports, improve audit quality, ensure tax compliance and support business decisions.

Accounting professionals can use these technologies to automate repetitive tasks, analyse large volumes of financial data, identify unusual transactions, generate financial reports, improve audit quality, ensure tax compliance, and support business decisions.

Today, Artificial Intelligence plays an important role. It simplifies the processes and increases accuracy in the accounting profession.

With the help of financial data analytics, artificial Intelligence enhances transaction processing, account reconciliation, draft financial statement preparation, financial reporting, fraud detection, and outlier identification. In the taxation domain, it supports tax planning, document verification, and report preparation. In the field of management accounting, AI techniques are used for budgeting and forecasting, performance evaluation, and the design of planning strategies.

Research Methodology

The present study aims to review the existing literature on the use of Artificial Intelligence in the accounting system. It focuses on review, application, and future of the accounting profession. This study adopts a descriptive review methodology based on secondary data collected from peer-reviewed journal articles, books, professional reports, publications of accounting firms, and reports of professional accounting bodies. A thematic review approach has been adopted to synthesize the existing literature. The findings of this review study are expected to contribute to academic research and provide valuable insights for accounting professionals, educators, business organizations, and policymakers regarding the future of Artificial Intelligence in the accounting profession.

Literature Review

• Artificial Intelligence in Accounting

- Sutton, Holt, and Arnold highlighted the growing importance of Artificial Intelligence in Accounting System. In the paper, the Authors discussed how traditional accounting systems focus on record-keeping, calculating profit, and informing stakeholders of the results and how AI base accounting systems analyses financial information, prepare financial reports, and support decision-making. The Author emphasised that *"using AI in accounting, enhances the efficiency, accuracy, and reliability of accounting information by automating repetitive accounting activities and reducing human intervention and processing the information in real time"*. The study concluded that, *"AI can transform conventional accounting information systems into intelligent decision-support systems"*.

- Murphy et al. (2024)

In 2024, an author explained the adoption of AI technologies in accounting information systems. The study highlighted how artificial intelligence tools improve financial reporting, data analysis and managerial decision-making. The author also emphasised the need for digital competencies among accounting professionals to utilise AI-enabled systems.

Critical Analysis

Sutton et al. (2016) provide the theoretical foundation, whereas Murphy et al. (2024) focus on contemporary AI technologies.

Both studies conclude that further empirical research is essential to understand governance, organisational adoption and long term business results

• **Artificial Intelligence in Auditing**

Kokina and Davenport (2017): studied how Artificial Intelligence (AI) and analytics are increasingly used in auditing and explained how AI helps auditors to analyse large datasets, find problems, assess risks, automate repetitive tasks and improve the quality of audits. AI allows auditors to concentrate on their professional judgment and strategic decisions. They concluded that AI can do audits more efficiently, but it cannot replace the critical thinking and ethical responsibilities of auditors.

- **EY (2023):** In 2023, EY discussed how companies use AI in auditing through AI-enabled audit platforms and intelligent analytics.

The report shows that AI helps review documents, test transactions, detect fraud, and assess risks by analysing large amounts of both structured and unstructured financial data. The artificial intelligence technology helps auditors to work more efficiently.

- **Gu et al. (2024) :** The author, in 2024 found that by using Artificial Intelligence for audit domain, it improves audit quality and decision-making. Using artificial intelligence it helps to identify risks, increases accuracy and supports continuous auditing. Along with its advantages of using this technology, the author pointed out some challenges like input data accuracy, transparency, algorithmic bias due to inaccurate data and data management.

Critical Analysis

The study shows that artificial intelligence technology is changing auditing through automation, intelligent analytics, and continuous monitoring of all transactions. Academic studies and professional reports agree that Artificial Intelligence technology improves audit quality and operational efficiency. It supports auditors rather than replacing them.

• **Artificial Intelligence in Management Accounting**

- **Bhimani (2020)**

In 2020, Bhimani studied the implications of Artificial Intelligence in management accounting and organisational decision-making. The study found that budgeting, forecasting, performance measurement, and strategic planning improve through advanced analytics and predictive modelling. The author emphasized that management accountants must develop digital competencies to interpret AI-generated insights and support organizational decision-making effectively. The study also highlighted the changing role of accountants from traditional record keepers to strategic business advisors.

Critical Analysis

The study shows that AI has changed the role of management accountants by supporting data-driven planning and forecasting. If technology improves decision quality, organisations must invest in employee training, governance, and digital infrastructure to maximise the benefits of AI-enabled management accounting.

• **Digital Transformation of the Accounting Profession**

- **Moll & Yigitbasioglu (2019) :** Moll and Yigitbasioglu (2019) studied how digital technologies are changing the Accounting Profession. They found that Artificial Intelligence is transforming the accounting profession through automation, intelligent decision support, and digital business processes. The authors claimed that accountants must acquire analytical, technological, and strategic competencies to stay up to date in an increasingly digital business environment. The authors also state that organisational transformation

requires continuous learning and adaptation rather than simple technological implementation.

Critical Analysis

The transformation from conventional accounting to artificial intelligence is changing the professional role of accountants. In future, accounting professionals are expected to combine technical accounting expertise with digital literacy, critical thinking, and analytical capabilities to create organizational value.

Professional Perspectives

- **Deloitte:** Deloitte is a global professional services firm that provides audit, consulting, financial advisory, risk management, and tax services. Deloitte highlights how Artificial Intelligence is transforming finance and accounting through tools such as intelligent automation, predictive analytics, and continuous monitoring. These tools help to improve operational efficiency and financial reporting. Deloitte also encourages companies to create responsible AI governance frameworks.
- **PwC:** PwC provides services in audit and assurance, tax, legal, consulting, and financial advisory services. The company identifies AI supports financial reporting, audit documentation, regulatory compliance, and decision-making. The firm also uses Generative AI to boost productivity, but it needs proper governance and ethical oversight.
- **EY:** EY Company focuses on using AI for Auditing, risk assessment, fraud detection, and intelligent analytics. By using Artificial Intelligence technology, the company aims to improve operating efficiency, Audit quality, and audit transparency.
- **KPMG:** The company focuses on adopting AI technologies across its various business areas, including governance, cybersecurity, data quality, and regulatory compliance. The firm believes that combining AI technology with professional knowledge improves decision-making and better financial reporting.

Critical Analysis

Professional firms recognise Artificial Intelligence (AI) as a key to improving their accounting practices. They agree with academic research on the benefits of automation and data analytics. However, they place greater emphasis on the practical implementation of AI, governance, cybersecurity, and regulatory compliance. They also focus on using AI effectively in business operations to improve efficiency and decision-making. This shows a growing alignment between academic research and professional practice in the adoption of AI in accounting.

Emerging Trends in Artificial Technology

- **Generative AI:** Companies use Generative AI for the preparation of financial reports and to summarise accounting information, which helps management with decision-making.
- **ChatGPT:** It supports the analysis of financial information, report preparation, and improved productivity.
- **Large Language Models (LLMs):** LLMs enable advanced financial analysis, intelligent document processing, and conversational support in decision-making.
- **AI-enabled ERP Systems:** AI-enabled ERP systems use artificial intelligence for invoice processing, forecasting, budgeting, and financial reporting.
- **Blockchain and AI Integration:** By combining block chain technology with Artificial intelligence, improves fraud detection and financial system. Blockchain technology creates a secure and inflexible record of transactions and it is easy to track and audit financial activity. AI technology can check all the transactions and finds unusual activity and prevent organisation from financial losses
- **Human–AI Collaboration:** Research shows that artificial intelligence (AI) should help accountants instead of replacing them. . AI can be used for routine task and data analysis and accountant can devote more time for professional judgments and ethical decisions. and strategic decision-making. This collaboration can improve operational efficiency.

Critical Analysis

The growth of artificial intelligence technologies is changing the accounting profession. Instead of just processing the routine transactions, accountant can use intelligent systems. AI technologies (Generative AI, ChatGPT, Large Language models, AI-enabled ERP systems) make accounting field more efficient. But several challenges still need to be addressed, including ethical governance, cyber threats, and data privacy protection. Future research should be focus on responsible use of AI technology, building strong governance frameworks, and the development of the skills required for effective teamwork with AI.

Artificial Intelligence Technologies Used in Accounting

Artificial Intelligence (AI) is changing the Accounting profession from conventional Accounting to Intelligent Accounting system. This system automate routine tasks, improve analytical capabilities, and support decision-making. Artificial Intelligence technology can handle structured and unstructured data, discover hidden patterns, provide predictive insights and learn from new information. The following are the Artificial intelligence technologies used in Accounting.

- **Machine Learning (ML)**

Machine Learning (ML) is a technique of Artificial Intelligence. It enables systems to learn from historical data, recognise patterns, and make predictions without being specifically programmed. In the accounting profession, Machine Learning analyses large financial datasets, detects unusual activity, classifies transactions, predicts financial outcomes, and assists in decision-making. Machine Learning is commonly used to detect fraud by finding suspicious transactions. Banks and accounting firms also use Machine Learning to automate credit risk assessments, forecast cash flows, analyse customer payment habits, and improve the accuracy of budgeting and forecasting. Machine Learning helps improve audit quality by analysing entire accounting datasets rather than relying solely on data sampling. Inaccurate data can lead to inexact results, it requires data accuracy and model checking. This shows the need to regularly check and validate AI models.

- **Natural Language Processing (NLP)**

Natural Language Processing (NLP) is another technology that helps computers understand, interpreted and generate reports in human language. Normal accounting software fails to analyses financial reports, contracts, audit documents, regulatory filings, emails, and other written information But NLP can do it easily. This technique can be used by accounting professionals to generate reports from structured and unstructured data, analyse management discussions, and identify issues. It supports chatbots that provide real-time solutions to accounting queries. Thus, it improves operational efficiency and customer service. Language confusion, specific terms, and documents in multiple languages are some present challenges for accounting applications in NLP.

- **Robotic Process Automation (RPA)**

Robotic Process Automation (RPA) uses software robots to automate repetitive, rule-based tasks to streamline business processes. RPA interacts with existing accounting software in the same way as human users would. This eliminates the need for extensive system modifications.

In the accounting profession, RPA techniques are often used for routine tasks such as processing invoices, accounts payable and receivable, bank reconciliations, payroll processing, transaction entry and posting, ledger preparation, and financial statement preparation, as required by law and for tax compliance. It helps to reduce processing time, improve accuracy, and reduce human errors. It allows accounting professionals to focus on impactful strategic decision-making and ethical considerations.

- **Generative AI**

Generative AI is another technique and the latest advancement in the field of Artificial Intelligence. Generative AI technique that primarily analyses existing accounting data and generates financial reports, account summaries and audit documentation. It prepares presentations and also gives explanations based on user prompts.

Accounting professionals use Generative AI techniques to prepare the draft of financial statements, summarise accounting notes as per accounting standards, explain financial concepts, generate management reports, and support research activities. This technology presents challenges

such as the risk of inaccurate information, confidentiality concerns, intellectual property issues, and ethical concerns. To face these challenges, human review is required at each step of the audit before relying on AI-generated outputs.

- **Predictive Analytics**

Predictive Analytics is the combination of Artificial Intelligence, statistical modelling, and Machine Learning techniques to forecast future outcomes based on historical financial data. This technique enables organisations to forecast financial trends, evaluate business risks, project future revenues, predict customer behaviour, and support strategic planning. It assists in preparing budgets and cash flows, assessing investment decisions, identifying financial risks, predicting high-risk transactions, and prioritising audit procedures.

The success of this technique depends on accurate historical data and appropriate analytical methods.

- **Intelligent Document Processing (IDP)**

Intelligent Document Processing (IDP): This is a technique of Artificial Intelligence that integrates with other AI techniques. It combines with other techniques such as Optical Character Recognition, Machine Learning, and Natural Language Processing. The system helps capture, classify, verify, and process information. It processes invoices, Bills, purchase orders, receipts, contracts, bank statements, tax documents, and audit evidence. It reduces manual data entry, improves document accuracy, increases processing speed, and supports regulatory compliance through automated record management. It helps to improve operational efficiency. It enables quick access to processed financial information.

Critical Summary

Artificial Intelligence in accounting has changed the accounting profession. The system automates various routine accounting tasks and repetitive processes, reducing the time required for manual transaction entry and the number of calculations. It enhances analytical capabilities and helps make decisions.

Today, the accounting and finance profession uses various artificial intelligence technologies, such as

- Machine Learning and Predictive Analytics, which are useful for financial trend analysis and the detection of fraud. It analyses past data and spots unusual and suspicious activities.
- Natural Language Processing and Intelligent Document Processing. It helps to process financial data more efficiently. The name "Natural Language Processing" itself suggests that it analyses and interprets data in natural human language and supports decision-making. Intelligent document processing is a tool that extracts data from various documents and processes it.
- Robotic Process Automation: It is another tool that automates repetitive tasks of transaction entry, invoice processing and reconciling accounts. It helps accountants concentrate more on higher-value accounting activities, like strategic planning.
- Generative AI: This tool also helps in preparing drafts of financial reports by collecting and summarising data, which increases accuracy in financial documentation.

All these AI technologies offer benefits to the accounting profession, but their successful implementation requires careful attention to several critical factors such as the system is aligned with organisation's goals, data inaccuracy, maintaining transparency in automated decisions and proper training to accounting professionals to leveraging them to AI technology.

Applications of Artificial Intelligence in Accounting

Artificial Intelligence (AI) has changed the accounting profession by automating basic tasks and improving analytical capabilities and decision-making. Now, various artificial intelligence technologies are integrated into accounting systems, helping to make operations more efficient, generate financial reports, and ensure compliance and risk management. AI technologies are useful in various areas of accounting, including financial accounting, auditing, taxation, management accounting, fraud detection, and financial reporting.

- **Artificial Intelligence in Financial Accounting**

Financial accounting is the key area of the accounting profession where AI has improved operational efficiency and accuracy. In accounting, Robotic Process Automation (RPA) and Intelligent Document Processing (IDP) help record and process business transactions, including invoice processing, accounts receivable and payable, and account reconciliation. Both RPA and IDP reduce manual intervention in extracting financial data from various ledgers, invoices, and bank statements. The need for human intervention. It reduces manual effort in extracting financial data from invoices, receipts, and bank statements.

A machine learning tool helps analyse historical financial information to spot suspicious transactions and predict future financial trends.

Generative AI techniques assist accountants in preparing a draft of the financial statement, summarising accounting policies, and generating explanatory notes to accounts.

- **Artificial Intelligence in Auditing**

In the auditing domain, it uses Artificial Intelligence tools such as Machine Learning. This tool allows auditors to analyse all financial transactions and easily detect suspicious activity.

Through Natural Language Processing techniques, auditors extract information from contracts, legal documents, meeting minutes, and regulatory reports. It improves audit quality and efficiency.

- **Artificial Intelligence in Taxation**

Artificial Intelligence technology has improved tax management and compliance systems. Tax systems with AI tools automatically calculate taxes, prepare and administer taxes, and manage tax planning and compliance, including voice checks and verification, as well as compliance monitoring. A machine learning tool analyses tax data to identify unusual patterns and detect fraud. It also estimates tax liabilities. Natural language processing tools help to understand tax laws, government rules, and recent updates related to w. Artificial intelligence in the tax system supports predictive tax planning.

- **Artificial Intelligence in Management Accounting**

In the area of Management accounting, Artificial Intelligence technology helps in planning, budgeting, forecasting, cost analysis, and performance evaluation. Predictive Analytics and Machine Learning tools are using to analyse historical financial and operational data and to predict business performance and support strategic decisions. It enables real-time monitoring of organizational performance by using intelligent business system. But the successful implementation of AI in management accounting depends on data accuracy, employee competencies, and organisational readiness for AI. To get the benefits of Artificial Intelligence system, it is essential to invest in both employee training and digital infrastructure.

- **Artificial Intelligence in Fraud Detection**

Fraud detection, is the most important area of applications of Artificial Intelligence. Machine Learning algorithms, analyses financial transactions and identify unusual patterns, suspicious activities, duplicate payments if any, unauthorised transactions, and accounting irregularities. The system learn from historical fraud cases and improve it's capability to spot new fraud cases. Predictive Analytics, it helps to manage risk by identifying potential fraud cases before they lead to significant financial losses.

- **Artificial Intelligence in Financial Reporting**

Financial reporting is the most functional area of any business. AI technology automates data recording, report generation, account reconciliation, and disclosure preparation. It also prepares the draft of financial statements. Generative AI helps create reports from management discussions, explanatory notes, and financial summaries.

A predictive analytics tool enables organisations to anticipate future financial trends.

Critical Analysis

Artificial Intelligence has changed the way the accounting and finance profession works by enhancing automation, analytical capabilities, and decision-making. It automates routine processes, invoice management, and receivable and payable management. It focuses on data analytics, risk evaluation, fraud detection and protecting against financial losses. It streamlines tax management and its

compliance. It prepares drafts of financial statements, budgets, forecasts, trend analyses, and financial reports.

However, the successful implementation of the AI system in the organisation requires accurate data, robust governance systems, and cybersecurity measures to protect data from cyber-attacks, ensure regulatory compliance, and support continuous training to upskill professionals. Therefore, it is important to view AI technology as a supportive tool rather than a replacement for professional skills.

Industry Adoption: Corporate Case Examples

Artificial Intelligence is used in various companies to improve efficiency and effectiveness in the accounting Profession. Various companies can use Artificial Intelligence technologies across functional areas of accounting recordkeeping, auditing, taxation and compliance, management accounting, fraud detection, financial reporting, and strategic decision-making. following is the list of organisations using AI in Accounting. These organizations were selected because they represent global leaders in technology, enterprise software, and professional accounting services.

- **Amazon**

Amazon is a major supply chain and logistics company that uses machine learning techniques. It handles invoice processing, payment verification, inventory valuation, and fraud detection. Amazon Systems analyses the financial transactions. It helps the company with account reconciliation, cash flow management, and more accurate financial reporting. Predictive analytics techniques support demand forecasting and inventory planning, enabling the finance department to make better decisions.

Amazon also faces challenges related to data privacy, cybersecurity threats, and ensuring transparency in AI-driven decision-making.

- **Microsoft**

Microsoft integrates Artificial intelligence technology to its *Dynamics 365 Finance platform*. It improves accounting and financial management processes by supporting its automated book-keeping, financial reporting, budgeting, forecasting, expense management, and compliance monitoring. Microsoft has also introduced a Generative AI assistant, Microsoft Copilot, which helps accounting and finance professionals analyse financial data, prepare reports, summarise accounting information, and improve decision-making. These AI-powered tools increase productivity while reducing manual effort and operational costs.

- **Oracle**

Oracle uses Artificial Intelligence within its cloud ERP Oracle Fusion to automate accounting processes, financial reporting and risk management. It provides real-time insights into business performance and supports data-driven decision-making. Oracle's Intelligent Document Recognition technology automates invoice processing and reduces manual data entry, improving efficiency and accuracy.

- **Deloitte**

Deloitte has developed audit solutions using artificial intelligence system. It reorganises some auditing processes, such as review of document, evaluation of transaction, detection of fraud, identification and assessment of risk. The company supports good governance, transparency, and the ethical use of artificial intelligence in its business.

- **PwC, EY and KPMG**

PwC employs Generative AI technology in its business for auditing, tax management and compliance, financial reporting, and advisory services. It automates repetitive accounting tasks, analyses financial data, identifies compliance risks, and improves audit documentation.

- **IBM**

IBM uses AI to enable accounting solutions through **IBM Watson**, enabling accountants to analyse large volumes of financial data and improve decision-making and operational efficiency. Watson platform supports financial analysis, intelligent document processing, fraud detection, and business forecasting.

- **Tata Consultancy Services (TCS)**

TCS integrates artificial intelligence, cloud computing, and analytics in accounting and finance through its automation platform. It helps to automate accounts payable, accounts receivable, financial reporting, tax compliance, and reconciliation processes. TCS emphasises integrating AI with cloud computing and analytics to improve business efficiency and drive digital transformation.

- **Infosys**

Infosys integrates Artificial Intelligence technology with company's business finance platform 'Infosys Topaz', supports automation, financial analytics, and predictive decision-making. It assists organisations with financial planning, compliance management, and risk assessment. Infosys underlines responsible AI practices, follows ethical standards, and protects data security.

Critical Analysis

The above example shows that Artificial Intelligence is a key part of the accounting profession. Many organisations are using various artificial intelligence techniques to automate routine tasks, improve financial reporting, strengthen internal controls, enhance fraud detection, and support strategic decision-making.

Technology companies like Infosys, TCS, Microsoft, IBM, Oracle, and SAP have integrated Artificial Intelligence into their ERP (Enterprise Resource Planning) systems and financial management platforms. In contrast, Professional accounting firms Deloitte, PwC, EY, and KPMG focus on AI-enabled auditing, risk assessment, and regulatory compliance.

The above examples, shows that artificial intelligence technology supports accounting professionals rather than replacing them. But it requires proper training for employees to upskilling them to handle this technology. Successful implementation of this technology successfully, it requires effective governance, regulatory compliance, and cybersecurity measures.

Challenges of Artificial Intelligence in Accounting

Although there are various benefits of incorporating Artificial Intelligence into Accounting system, also brings challenges.

- **Data privacy and cyber threats:** Data privacy and cyber threats are challenges for artificial intelligence technology. Organisations that use AI systems that collect and process sensitive financial information rely on large amounts of data and create opportunities for cyberattacks.
- **Expensive implementation of AI systems:** Implementing artificial Intelligence is an expensive decision for small businesses. It not only includes the price paid for the system but also the costs of cybersecurity measures and employee training.
- **Ethical concerns:** The integration of Artificial intelligence technology creates ethical issues. Organisations should make sure that action is taken responsibly. It should ensure that decisions made by Artificial Intelligence do not raise ethical issues. Organisations must ensure that AI systems operate responsibly and align with professional standards, legal guidelines, and ethical principles. Human involvement must be there to ensure transparency, confidentiality and accountability in decision-making.
- **Reskilling and upskilling:** The increased use of Artificial Intelligence in accounting profession has raises concerns about changing responsibilities for accounting professionals. It creates a need for ongoing staff training to remain relevant in a technology-driven environment.
- **Algorithmic Bias:** Training machine learning techniques requires accurate data, and it will yield unbiased results. While training the models, they should be given accurate data. Training with inaccurate data produces biased outcomes. It may affect financial analysis, fraud detection and decision-making.
- **Explainability:** Many AI models operate as "*black boxes*," making it difficult to understand how and why they generate decisions.
- **Employee Resistance**

Employees may not be ready for implementing AI due to uncertainty about their jobs. The adoption of AI often raises concerns about job displacement and changes in professional roles.

Future Directions

Artificial Intelligence technology shapes the future of the accounting profession. As technology improves, it will not only automate routine tasks but also assist in making strategic decisions. It will do more than smart decision-making, predict financial trends, help in sustainability reporting, and provide business advice.

- **Human–AI Collaboration:** In future, Accounting professionals will work with artificial intelligence technology. Artificial intelligence technology will handle routine tasks, data processing, invoice management, etc. The accountants will focus on ethical decisions, law, planning, etc.
- **AI-Enabled Accountants:** Future accountants will be required to possess competencies in various areas, including Artificial Intelligence, financial data analytics, Artificial Cyber security, etc. They should update themselves to stay relevant in this digital world.
- **Sustainability and ESG Reporting:** Artificial Intelligence is expected to enhance its role in Environmental, Social and Governance (ESG) reporting. It will automate sustainability data collection, analyse environmental performance, and improve disclosure quality.
- **Intelligent ERP Systems:** In future ERP system will use artificial intelligence to automate financial management, predictive forecasts, budgeting and real time decision support.
- **Explainable Artificial Intelligence:** Future systems should focus on transparency and explainability which improves the trust of stakeholders, compliance with and reliability.
- **AI Governance and Ethics:** Organizations will adopt artificial intelligence framework. It will promote fairness, accountability, transparency, and ethical decision-making.
- **Blockchain and AI Integration:** By combining Blockchain and Artificial intelligence technology, the combination will improve financial transparency, secure transaction processing, audit trails, and fraud prevention.

Conclusion

Artificial Intelligence is a transformative technology, changing the accounting profession through automation, intelligent analytics, and data-driven decision-making. Artificial intelligence technologies, such as Machine Learning, Natural Language Processing, Robotic Process Automation, Predictive Analytics, Generative AI, and Intelligent Document Processing, are making finance tasks easier. It is more efficient in accounting functional areas such as accounting, auditing, taxation, management accounting, fraud detection, and financial reporting.

The company example in the paper indicates that the technology upgrade the company's operational efficiency. Yet some challenges related to data privacy, cyber threats, ethical considerations, algorithmic bias, implementation costs, employee competencies, etc., will make it very difficult to manage for some businesses.

To deal with the challenges, companies should invest in technology, build strong organisational governance frameworks and cybersecurity measures against cyber threats, and increase employees' competencies to handle this technology.

In conclusion, we can say "*Artificial Intelligence as a tool that is designed to support the accounting profession, rather than replace it*". The future of the accounting profession depends on the collaboration of human skills, knowledge, and ethical decision-making with Artificial Intelligence technology, which enhances organisational performance, reporting, and sustainable business growth.

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