

A STUDY ON AI APPLICATIONS IN FINANCIAL REPORTING

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Abstract:

This research paper examines the Artificial Intelligence has a transformative role in accounting and financial reporting. It offers accuracy, efficiency and decision making in financial matters. AI technologies perform several tasks like data entry; invoice processing, auditing and reducing human error. But it also has some challenges with data privacy and bias in algorithms. At the end the paper concludes by emphasizing the application of AI implementation is required along with human expertise to survive in the digital innovative world.

Keywords: *Artificial intelligence, financial reporting, Accounting, finance.*

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Introduction:

AI is the integration of various applications such as deep learning, machine learning, and natural language processing and algorithm production. It is beneficial for individuals as well as various fields such as education, industrial, social, economic, and business organizations to solve problems. There are several business activities that can be accomplished with the use of AI. Accounting is one of the areas in organization that benefited from AI in accounting.

The traditional method of manual accounting consists of recording all financial transactions of the business organization to run business efficiently and effectively. It includes preparing financial statements such as income statements, balance sheets, cash flow statements, bank reconciliations, taxation reports, and companies ledger. It requires continuous interaction with the staff that takes a lot of time. Further, it may contain errors that are found during auditing. It also has limitations of speed and accuracy of financial statements analysis.

The main advantage of artificial intelligence in the field of accounting and finance is reduction in monotonous work and maintaining a large amount of data. With the application of AI, it is possible to perform and complete human tasks within a short period of time with accuracy. Financial statements of an organisation can be easily accessible and stored through cloud technology, machine learning etc. It provides accurate financial reports, minimizes the risk of human errors and frauds. AI enables us to complete time consuming accounting tasks within seconds or minutes. It also helps with real time financial statement analysis and providing timely business information and reports. In short, it improves accuracy, speed and decision making.

In the near future, our traditional accounting will fully transform into AI based accounting technology and will raise several concerns such as fear of unemployment and obsolescence of current software, security, estimated

displacement of jobs, and data privacy. Accountants will need to update their skills to work and rely on AI based technology.

Review of Literature:

1. Research by Ruby Ghosh (2025) shows that AI increased operational efficiency and accuracy in the financial reporting process but at the same time it raised problems of data security and ethical issues. Therefore, AI development in the long run will fully depend upon the mutual relationship between human skill and AI.
2. Hao Pan, Zhe Zhang (2024), investigated that it is crucial to achieve a right balance between AI generated work and human scrutiny. AI is known for constructive financial reports, accuracy, data processing and speed but still potential risk is associated with implementation of AI. Business organizations need to set up stable governance systems that evaluate AI models periodically and ensure transparency in financial reporting.
3. Beryl Odonkor, Simon Kaggwa, Prisca Ugomma Uwaoma, Azeez Olanipekun Hassan and Oluwatoyin Ajoke Farayola (2024) highlighted that implementation of AI has brought several benefits as well as challenges. There is a need for skilled manpower to adept AI technology. Issues related to Data privacy, security and AI technology cost need to be resolved. Continuous learning, adoption of advanced technology and strategic planning is required to overcome challenges raised from AI.

Objectives:

The research study covers the following objectives.

1. To study the role of AI in the accounting and finance.
2. To assess the impact of AI on efficiency, correctness and reliability of financial reporting.
3. To identify problems and challenges and ethical concerns related to the implication of AI.

Research Methodology:

The study is descriptive in nature and purely based on secondary data. The data gathered from various secondary sources such as published research papers based on AI's impact in accounting and finance, literature review, website, books and reports available on the internet. It utilised existing articles, market analysis and case studies to find out the impact of AI on financial reporting. The data selected for the study by considering authenticity, relevance and applicability of the topic.

Applications of AI in Accounting and Financial Reporting:

1. **AI-Driven Financial Reporting:** The AI system helps to pull out data from various sources such as invoices, bank statements, receipts and record it automatically in accounting software. It generates accurate financial reports and saves time due to reduction in manual data entry and human errors. Further, it provides coverage of continuous audit through analysis of 100 percent transactions and detection of errors. Automatic tax calculation, financial reporting is also done by AI systems.
2. **Data Analysis:** AI tools provide detailed data analysis and valuable summary from large financial data. It enables accounting professionals to derive significant perception to discover trends, relationships, and exceptions. It also provides a view for financial budget, decision making and estimation of financial transactions in future.

- 3. Detection of Fraud & Risk Management:** AI algorithms can easily find out fraud activities by analyzing financial transactions related to debtors, creditors and other relevant data. It assists in prevention and detection of fraud by highlighting fraudulent transactions and potential discrepancies. Machine learning indicates variation in regular transactions.
- 4. Preparation of Financial statements:** AI based tools help in preparation of financial statements of companies through data collection, classification, categorization, summarization, and reporting. It generates accurate financial reports within a short time with compliance of accounting standards and provisions. AI tools can also perform detailed financial ratio analysis and provide insight on liquidity, profitability, and solvency and on other important indicators.
- 5. Financial advice and customer service:** AI-based chatbots is a virtual aid that provides instant support to customer's needs. These chatboats give a quick reply to inquiries, answering questions about investment and loans, provide account information and even provide financial advice.
- 6. Predictive Analysis:** A business organization can forecast cash flow i.e. revenue and expenditure with the help of machine learning model by assuming various scenarios under different economic situations.
- 7. Auditing and Risk Management:** AI tools undertake the analysis of current market trends, historical data and risk factors to assess financial risk. They provide contemporary tools to auditors to ascertain potential risk and smooth auditing. It not only increases efficiency but also accuracy in the risk management process.

Benefits of AI:

- 1. Time efficiency:** Due to automation of repetitive tasks of AI, accounting professionals can concentrate more on analytical and advisory roles that help to improve their productivity.
- 2. Scalability:** The AI system processes a large number of transactions without any additional resources, workforce and time.
- 3. Reduced Cost:** The application of AI in accounting enhanced accuracy and efficiency in processing financial data. It cut down processing time. It reduced manual error in reporting. It also reduces cost related to correction of work done by manual labour.
- 4. Accuracy & Decision making:** the data analytics and machine learning technologies enable conversion of large financial data into short financial summary that gives crucial insights. AI reduces errors made by accounting professionals in data entry and data analysis. It makes analysis more accurate and reliable that helps for better decision making and ultimately enhancing organization's outcome.

Challenges of AI:

- 1. High Investment:** Adoption and implementation of AI systems in accounting and financial reporting required huge investment in software, infrastructure facilities, training to employees, data management and maintenance. Estimating the return on substantial investment and the value of AI technology demonstration are challenges that business houses need to work on.

- 2. Data Privacy and security:** AI deals with confidential financial data. Therefore building confidence in application of AI among various stakeholders such as clients, employees and regulatory authority become essential. Here, cyber security plays an important role to avoid any contravention.
- 3. Manpower skill gap:** AI demands additional resources and time to provide training to employees in operation of AI tools effectively and efficiently. The application of AI in financial reporting needs to enhance skills of accounting professionals to adopt new responsibilities. Providing required AI skill or knowledge and adoption or implementation of the same by employees can be a challenge for the smooth functioning of AI systems in organizations.
- 4. Ethical Considerations:** Several ethical issues raises due to application of AI in accounting and financial reporting including usage of personal and financial data, potential consequences on employment and responsibility for AI based decisions. It is crucial to identify and address these challenges for smooth implementation of AI systems.
- 5. Depend on manual workforce:** Though AI systems generate accurate financial reports, these output must be monitored, analyzed and interpreted by human experts for decision making.
- 6. Lack of clarity in AI regulation:** Accounting standards and guidelines related to AI are still progressive in nature that brings uncertainties in usage of software.

Case Studies of AI in Finance and Accounting:

1. Citibank: AI in Credit Risk Assessment

Citibank is one of the reputed banks. It uses AI-based tools for assessment of credit risk. This AI tool helps banks to identify high risk customers and potential loan defaulters. AI powered machine learning algorithms are used to assess large amounts of customer data such as their payment history, investment habits, spending patterns to check creditworthiness. It helps to take risk management decisions and reduces potential bad loans and increased profitability. The application of AI assists Citibank to enhance accuracy of risk assessment and to reduce manual credit scoring time by 70%. The ability of Citibank to estimate loan defaults has improved and helped them to get better financial performance.

2. Ernst & Young (EY): AI in Financial Audits

Ernst & Young uses an AI based accounting system to improve its efficiency in financial audit. The company uses machine learning and natural language processing to analyze large amounts of accounting data. It identifies abnormal transactions and ensures compliance with financial regulation. AI tools cut down the time required for audit and enhance accuracy in findings by automatic data extraction and document review process. Therefore, the audit completion time of Ernst & Young has reduced by 40%. On the other hand it increases its accuracy to ascertain discrepancies in financial records. With the implementation of this application EY has benefited with reduced cost, streamline operations and better insight to clients.

3. Intuit: AI in Tax Preparation

TurboTax uses AI to enhance its taxation software. AI algorithms analyze user's data and assist in tax filing of individuals and business organizations by giving recommendations of credit and deductions. AI-based Chatbot service of TurboTax provides real time assistance to their customers and ensures filing of taxes efficiently and properly. The AI application gave user friendly experience and enabled TurboTax to raise their returns above 40 million per annum. These AI tools saved an estimated 200 million hours and made tax filing accurate, easier and simpler.

Conclusion:

There is a multidimensional impact of AI on financial reporting. Though the application of AI brings efficiency and accuracy in accounting reporting, but at the same time, It brings few challenges such as algorithmic bias, over reliance on AI technology, data privacy issue and ethical considerations that are required to be resolved. However, to discover the full potential of AI, effective management is required for up skilling of manpower, ethical use, transparency and resilient governance. Further maintaining a right balance between skills of accounting professionals and AI is also crucial in this digital era.

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