

Artificial Intelligence In Accounting: Opportunities & Challenges

Neetu Dongre
Research Scholar
Department of Commerce
Govt. V.Y.T.PG Autonomous College, Durg (C.G.)

Alka Pandey
Research Scholar
Department of Commerce
Govt. V.Y.T.PG Autonomous College, Durg (C.G.)

Dr. O. P. Gupta
Professor
Department of Commerce
Govt. V.Y.T.PG Autonomous College, Durg (C.G.)

ABSTRACT:-

Artificial Intelligence (AI) is the terminology of technology that means make machine smart. It is a system that is designed by a human to work intelligently. It is mainly developed to increase the capability of learning and problem-solving. AI plays a vital role in the accounting system to efficiently manage accounting works in the organization. In an accounting process data analyzing and interpreting is one of the complex tasks to the big organization and the use of AI technology gives high positive results like increasing productivity, improving accuracy, reducing cost and time. This article will be focusing on the relationship between Artificial Intelligence and the accounting system. The main objective of this article is to develop concepts and understanding of artificial intelligence.

Keywords:- Artificial intelligence, accounting process, productivity

INTRODUCTION

Artificial Intelligence (AI) is based on the assumption that human thought mechanized through this process. The study of this assumption has a long history. Chinese, Indian and Greek philosophers all developed structured methods of formal deduction within the first millennium BCE. Their opinion was developed over the centuries by philosophers such as Aristotle (who gave a formal analysis of the syllogism), Euclid (whose Elements was a model of formal reasoning). In the 1940s and 50s, scientists of different areas (mathematics, psychology, engineering, economics, and political science) began to discuss the possibility of creating an artificial brain. The field of artificial intelligence research was discovered as an academic discipline in 1956. At Dartmouth conference, 1956 John McCarthy (American Computer scientist) first propounded the term Artificial intelligence. After that all over the united state explore the potential of AI.

Artificial Intelligence is an experimental branch of computer science that pursues its goal of creating an intelligent machine that can perform diverse tasks by using its intelligence. artificial intelligence as the study of how to make computers do things better than humans. Thus systems that think and work as human intelligence. In another viewpoint, artificial intelligence is seen as the capability of a device to perform activities that would otherwise only be expected of the human brain. Artificial intelligence aims to make an intelligent machine that can react in ways similar to humans. It also comprises the ability to judge, understand relationships, and produce original thoughts. AI is rapidly changing how the financial organization operated functions and increased operational efficiency level with the minimum efforts. The field of accounting has a long history of artificial intelligence applications dating back more than 25 years mainly in the areas of financial reporting and auditing. This means that artificial intelligence will reduce the rigorous, tedious, and scrupulous nature of the accounting profession and make it more efficient

consulting services. According to the financial stability board, artificial intelligence is simply the application of computational tools to address tasks traditionally requiring human sophistication. The accounting systems and operations moved out of the area of paper journals and ledgers into computer-based formats with the advents of computers which has powered the artificial intelligence in applying the methods of self managements and self-tuning, self-configuration, self-diagnosis, and self-healing to achieve optimum results in accounting operation.

Types of Artificial Intelligence

1. **Weak AI** (narrow AI):- non-sentient machine intelligence, focused on a narrow task.
2. **Strong AI** / artificial general intelligence (AGI):- (hypothetical) machine with the ability to apply intelligence to any problem, typically meaning "smart work as human".
3. **Super Intelligence**:- (hypothetical) artificial intelligence far surpassing that of the brilliant and skilled human minds.

Advantage of Artificial Intelligence

- In business activities such as analysis of document and handling are abundant in accounting and the uses of RPA (Robotic process automation) and (IA) Intelligent automation helpful to save time and increase the level of accuracy.
- AI thinks logically without emotion, often provides real-time status of financial matters since it can process documents using natural language processing and computer vision faster than ever making daily reporting possible.
- AI technology will enhance several internal accounting processes including procurement and purchasing, invoicing, purchase orders, expense reports, accounts payable and receivables, etc.
- Corporate firms and organizations appointed auditors to check books of account and ensure the validity and legality of their financial records and with the help of AI, the auditor can easily access the accounting work chances of error are very less.
- In Accounting firm the accounting functions such as Data handling data processing, preparing payroll bookkeeping this all are easily handled by AI.
- AI improving fraud detection through more sophisticated machine learning model of normal activities and better prediction of fraudulent activities

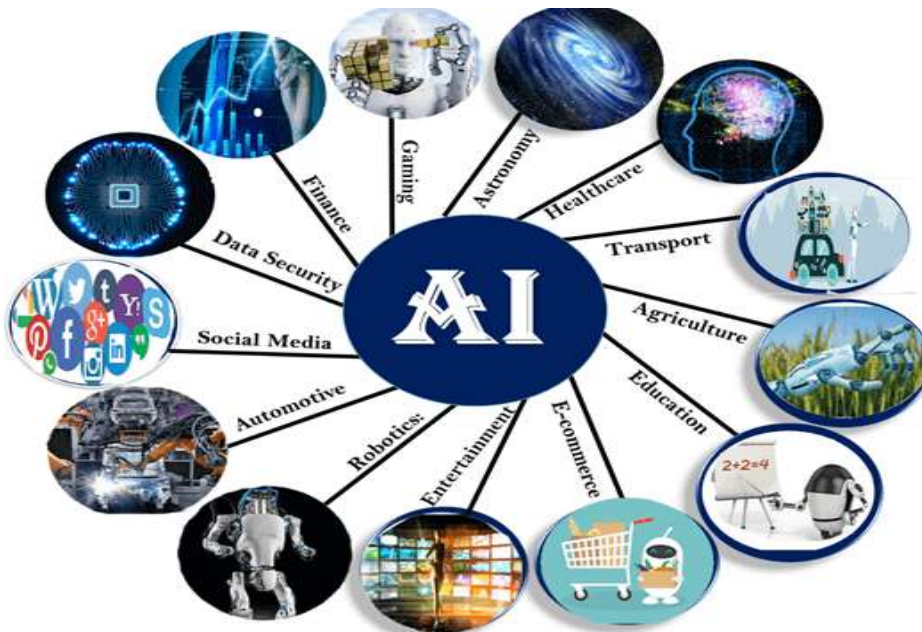
Uses Of Artificial Intelligence

- In the banking sector, AI helps to store banking data for a long time and easily access banking work.
- Ms-excel is designed in that way which supports accounting activities such as budgeting, preparing financial statements and balance sheets
- AI gives robots a computer vision to sense and calculate complicated work in an easy way and reduce human activity.
- In an organization, AI uses to improve workplace communication with the help of them the organization personnel easily understand their work this will lead to increase productivity.
- In the Health care department to maintain their records and accounts of every patient uses AI. It also helps to improve reliability, predictability, consistency of the pharmaceutical work.

- AI technology provides a competitive edge to e-commerce. It enabling shoppers to discover associated products feature such as size color brand and every year improve their visual capabilities and also the facility of e-billing, online payment, etc.

Application of AI

Artificial Intelligence has a variety of applications in the present scenario. It plays a crucial role in various sectors such as Healthcare, entertainment, finance, education, etc. AI solves a complex problem efficiently it makes our daily life more comfortable and easy.



The Functional Area Of Accounting

1. **Auditing** means examination or inspection of various books of accounts by an auditor. It is done to ascertain the accuracy level of a financial statement. These process three different category auditors includes such as external auditor, internal auditor, and EDP auditors. EDP auditors are either external or internal auditors concerned with the audit of computer-based systems. this type of auditor has appropriate tools and expertise to minimize errors.
2. **Accounting Information Systems (AIS):** AIS refers to the computerized accounting information systems that are developed to meet management's and external users' requirements. Accordingly, management and external sources are concerned with the expert systems accustomed to develop and implement the AIS.
3. **Management Accounting** concerned with the presentation of the professional knowledge and ability to disclose accounting information. In management accounting, AI plays a vital role in maintains records for

analyzing the data for the decision-making process & policy formulation, planning, and controls of the business. It mainly helps origination to take relevant decisions for the investment or earning more profit.

4. **Financial Accounting** is the process of preparing financial statements i.e. P&L A/C, Balancesheet that companies use to show their financial performance and position to people outside the company, including investors, creditors, suppliers, and customers.
5. **Tax accounting** focuses on the preparation, analysis, and presentation of tax returns and tax payments. This is a complex and time taking process but nowadays it becomes very easy to file return and tax payments calculation through the uses of different accounting software.

LITERATURE REVIEW

1. *Daniel E.O leavy, Robert M O keefe, "Impact of AI in Accounting work: Expert system use in Auditing and Tax"*, This paper analyzed the relationship between AI in accounting work and used Perrow's sociological framework as a basis for a comparative organization analysis of the impact of the expert system on organization issues.

2. *William E. Spangler, "The Role of AI in understanding the Strategic Decision Making Process"*. This paper evaluated that AI plays a vital role in the decision-making process through various theories and models such as Rule-Based Approaches, Analogical Approaches, Frame-based, and object-oriented approaches, etc.

3. *Cindy Greenman, "Exploring the impact of Artificial Intelligence on the Accounting Profession"*. This research paper concluded that the importance of AI in accounting work ie. in the respective task of book-keeping or process-driven assignment is replaced with automated technology.

4. *Cara jaslove, "The rise of Artificial Intelligence: An Analysis on the future of Accountancy."* This paper analyzed that accounting work becomes easy after the uses of artificial intelligence in data analysis work, bookkeeping, tax accountant work, etc. Overall, Artificial Intelligence will add value to the accounting industry, as a certified public accountant can shift their attention from monotonous tasks towards making more analytic and data-driven decisions.

5. *Odoh, Longinus Chukwudi" Effect of Artificial Intelligence on the performance of Accounting Operation among Accounting firm in southeast Nigeria,29 June 2018* This paper analyzed the performance of accounting work with the help of accounting work because artificial intelligence is rapidly changing how the financial institution is operated. This paper focused on paper and pencil entry to computer software entry and examined the effect of artificial intelligence on the performance of accounting operations among accounting firms in southeast Nigeria. For this purpose, a descriptive research design was adopted.

Opportunities

Artificial intelligence has several Opportunities for the Accounting sector. AI allowing software to learn through experience and perform tasks. It has become a hugely powerful tool for analyzing and automating the Accounting Function.

1. **Automation of workflows:** Improving the efficiency of workflows and practice systems is a common objective of accounting firm. AI has automation driven software function and its machine learning capabilities of AI software automatically learn and improve through experience and the input of data make it possible to automate many of the low-end element of bookkeeping tasks.
2. **Procurement:** In an organization, the procurement process has filled with paperwork and lots of complication arises at that time. AI software can be integrated and unstructured data is processed, the procurement system will eventually become paperless

3. AI Chatbots:

Chatbots are always delivering smart and flexible analytics through conversations on mobile devices using standard messaging tools and voice-activated interfaces. Chatbots helps to solve common queries from the customers including certain bills are due Account status, the Account balance in an efficient manner.

4. Accountant & Auditor:

In traditional times the accountant works take lots of time and services are also steady After the intervention of AI it makes it easy to handle the work reduces the time of the accountant Consultation and advising services also do with efficient manner. its uses also make auditor check and maintain audit report in an efficient manner

5. Accounts payable/receivable management :

Accounts receivable thrash about to clear invoice payments when customers combine invoices in one payment, pay incorrect amounts, or do not include invoice numbers with their payment. To clear the invoice, the employee either has to manually add up various invoices that may match the payment amount or contact the customer to clarify some information. AI-powered invoice management software process make accounts payable/receivable more streamlined and learn the accounting code for the respective invoice.

6. Business Firm

the objective of the business organization is to earn more profit through the effective utilization of resources.AI provides an opportunity to the business world for improving their working condition, increasing productivity by using advance technology reduce paperwork & also save time. It also helps maintain the P/L account & balance sheet of the firm and make a possible comparative analysis with rival firms.

7. Enhancing Marketing Through Real-Time Analysis

AI technology software not only provides opportunities to the accounting firms it also assists the market firm more effectively. In social and digital marketing, algorithms and machine learning capabilities of AI helps to target ideal clients

CHALLENGES

- 1. Need for advanced Computing Power:** Artificial intelligence tools and techniques require a lot of computing power. Which is required to process massive volumes of data to build an AI system and to utilize deep learning techniques. Obtaining and funding that level of computing power is challenging for businesses, particularly for small scale businesses and startups. The parallel processing system and cloud computing made this possible to some extent but as the volume of data goes up these are not reliable as the computing becomes more complex.
- 2. Organizational support and trust of people:** There have been few organizations interested in putting money into AI-based products. As there is very little implementation and currently in use of the AI product therefore the interest of the organizations is not lying into the investment for the products of AI. More there are not enough people who know how to operate machines which think and learn by themselves. Some fewer people can make understand other businesses the machine powered progress. For remedy of this problem is by offering platforms and tools that permit AI-driven work as a service for the customers so that they can use the AI and use the data on the readymade solutions. AI is still a black box for the people and people don't trust something until they know how the decision was made. Algorithms are complex to make people understand that it is more relevant to get more accurate and precise predictions.

3. **Till now AIs are designed for one track task:** Generally, any AI is designed to perform any specific or specialized task according to the input as the paradigm of the AI says, unlike the human mind which can choose between the better outcomes for any specific task. Which we can name as a generalized approach and this is yet to come in future. It means AIs need to be designed just to make sure that their solutions do not cause issue other areas which they are to be taken for consideration.
4. **Undoubtability:** There are very few AI available that can prove to be transparent, explainable, and provable. As the organizations working on AI-based products cannot illustrate clearly their vision and what they have achieved with the help of AI techniques, people are doubtful about its outcome and whether the output decisions are perfect or not.
5. **Data security:** In accounting, there is the usage of a lot of data and according to the purpose these data are used base on the AI platform. These data can be sensitive and private, hence there is a chance of data breach. The regulator for data privacy and usage is yet to come hence it is a great concern among the organization to implement AIs for accountancy.
6. **Ambiguity in the output:** There might be conflict in the process through which any input can be processed between organizations or persons, and it needs human brain involvement. hence it is still a task to generate AIs that can sustain such situations and give output on which everyone agrees. There may be some data which are bad and can lead to an unethical and unfair result. These results may be discarded because this can lead to a biased decision.

CONCLUSION AND SUGESIONS

The emergence of artificial intelligence is the result of social and economic developments. It provides benefits to all departments. AI has changed the traditional way of accounting works and improve personnel qualities, avoid accounting fraud, and create a positive impact on accounting. The use of AI applications will make the work of the accountant more valuable, rather than stay in simple accounting work. The use of AI in accounting increases analytical capability decision-making ability etc. It profound analysis of data new insights on business. For this purpose, I will suggest that it gives more attention to the increment of personal ability to understand the application of AI in accounting. The various program in colleges and universities provide theoretical as well as practical knowledge of the work. **AI is like the new era of the dynamo which can revolutionize the entire landscape of industries** it has the potential to renovate every sector as and when needed. AI positively influence the performance of accounting function, In this way, I will try to inculcate the opportunities and challenges of Artificial intelligence in Accounting. In recent times all over the world affected by COVID 19 and the uses of AI will enhance the conventional works transfer to digitalization works.

REFERENCES

1. Daniel E.O leavy, Robert M O Keefe, "Impact of AI in Accounting work: Expert system use in Auditing and Tax",
2. William E. Spangler, "The Role of AI in understanding the Strategic Decision Making Process" IEEE Transactions on knowledge and data engineering vol. 3 No.2 June 1991.
3. Cindy Greenman, "Exploring the impact of Artificial Intelligence on the Accounting Profession", Journal of Research in Business Economics and Management 8(3),1451,2017 March
4. Cara jaslove, "The rise of Artificial Intelligence: An Analysis on the future of Accountancy, April 2017
5. Odoh, Longinus Chukwudi" Effect of Artificial Intelligence on the performance of Accounting Operation among Accounting firm in southeast Nigeria,29 June 2018

6. [www.artificial intelligence.com](http://www.artificial-intelligence.com)
7. <https://www.enterpriseedges.com/importance-artificial-intelligence>
8. https://en.wikipedia.org/wiki/Artificial_intelligence
9. <https://www.educba.com/importance-of-artificial-intelligence/>