iJRASET
International Journal For Research in Applied Science and Engineering Technology



# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

**Volume:** 12 **Issue:** VIII **Month of publication:** August 2024

**DOI:** https://doi.org/10.22214/ijraset.2024.64079

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
*ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538*
*Volume 12 Issue VIII Aug 2024- Available at www.ijraset.com*

# The Application of Artificial Intelligence on Business operations and Accounting Practices and its Impact on Overall Organizational Efficiencies: A Review Work

Snehanshu Basu
*State Aided College Teacher-I, Umeschandra College*

***Abstract:*** ***This Paper shows the relationship between Artificial Intelligence and Accounting practices and practitioners by creating a crucial analysis of previous literature related to the study. This paper emphasizes on the impacts of AI on different accounting determination and to the different methods of accounting. As the introduction of AI different companies reshaping their financial decision-making process significantly. This specific study explores the different new ideas through which the business firm can also develop their position now and then. The study reviews the different articles, case studies, Annual Reports of the company. The findings significantly enhance the speed and accuracy of the company to all round's activities and also enhances the activities of Business 4.0 and 5.0. The stakeholders of the company also be benefited significantly to take quick and accurate decisions by reviewing AI driven financial reports. However, it comprises of some amount of barrier in this process where the study mainly emphasizes on all those areas for efficient operation of business firm through the adoption of AI.***
***Keywords: AI, Technological upgradation, Automaton, Financial Practices.***

## I. INTRODUCTION

The 'intelligence' in Artificial Intelligence (AI) refers to machines' ability to make an informed decision or actions based on the given information. Humans are called intelligent being because we can make independent decisions by factoring in information our environment. Our minds have a unique ability to learn, process billions of bits of information every second, solve problems, use logical reasoning, etc. In AI, this intelligence is stimulated by machines. They are fed information and then programmed to exhibit human intelligence. So, when a machine can act on its own and simultaneously run the operation then it will be deemed intelligent.

AI technique perform simple task, complex task, repetitive task, cognitive task that also require human like intelligence. The application of AI is becoming increasingly common to all types of industries. The different industries like manufacturing, retailing, servicing, financing, banking, automobiles are drastically using AI to improve productive efficiencies and reduction the overall cost of production.

The adoption of AI in the world also changes the shape of the business and most importantly affect different business units significantly. Industry 4.0 and Industry 5.0 are two consecutive industrial revolutions that aims to transform the way of businesses operate and manufacture goods. As we know that accounting plays an integral role in business of all types of businesses whether micro, small, medium, large and multinational helping stakeholders to evaluate business performance and also able to take informed decisions. AI is not only assisting the business organization and stakeholders to take informed decision but also helps them to assessment of risk, financial planning, preparing budget and for the purpose of tax compliance.

Under the traditional system of accounting the different accounting activities which are performed manually, the process can be time-consuming and error-prone. But the adoption of AI in the present era in accounting has the potential to save your time and effort. Several modern AI tool like Chat GPT, Google Bard, natural language processing technology, machine learning algorithms and neural neutrons-that are working together behind the scenes in order to perform different task like content generation, data analysis and forecasting. AI can enumerate large amount of data set and make data driven decision quickly.Artificial Intelligence (AI) is a crucial concept which means a lot. Basically, it is the Simulation of human activities and intelligence in machines, enabling the systems to perform tasks that obviously require human-like intelligence to take crucial decision. This decision may be learning decision, Problem –solving decision, reasoning capabilities, perception, language understanding, determination of future happenings, decision making capabilities and all other matters.

©IJRASET: All Rights are Reserved 

From the very beginning of AI, the hype about AI has continuing its acceleration and vendor has also mess up to promote how the different product and services incorporated it. This is a very great challenge all over the world to incorporation of AI in the business world. The introduction of AI has also significantly influencedall types of business organizations severely with industry 4.0 and industry 5.0. This would make the different business firm to promote connecting and other digital convergence between industry, businesses and other processes to build up their Industrial Internet of Things (IIoT)

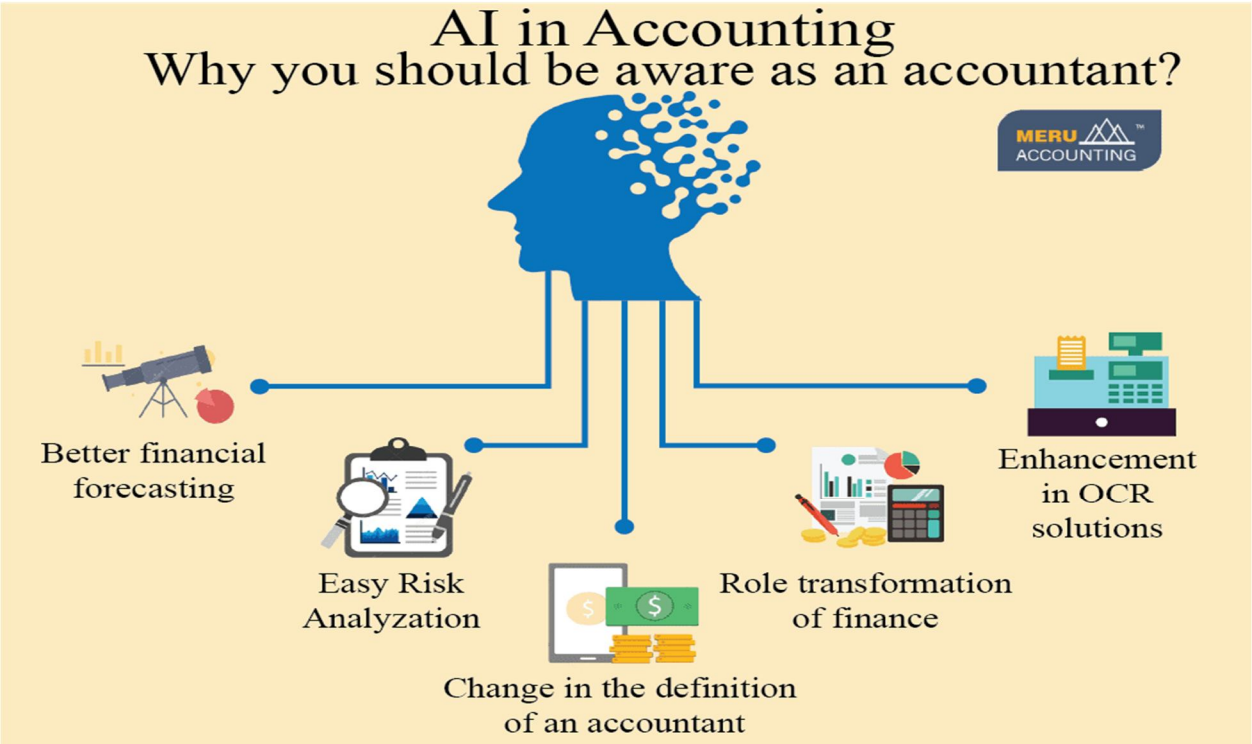
*A. Traditional Accounting practices without the concept of AI*

Traditional accounting practices refers to the conventional methods of accounting where different business organization maintained their books of accounts manually by the process of identification, summarization, classification, recodification and finally prepare a financial statement for the business firm. Over the time the complexity in the business organization has arises and the volume of transactions and variety of transactions also enhances. Therefore, different business organizations face lots of problems to cope with the situations and preparing accurate results in the organizations. In this backdrop AI performs all these activities very quickly and efficiently and also prepares results for the organizations.

*B. Evolution of AI in Accounting*

Before the adoption of AI several accounting activities like bookkeeping, recording and analysis of various forms of transactions were done manually. After introduction of computer in 1980s, Microsoft Excel were created to help people for performing their basic accounting and also to generation of simple financial statements. This remarkable invention actually the footprint of AI in India. Optical Character Recognition (OCR), which can able to read the different character from invoices and also store these datas in the system for analysis in future. In the beginning of 1990s, a small application of AI has been introduced. This is known as Artificial Neural Networks in accounting come into force to assist some common needs like fraud detection and business forecasting. Ai system has continuously grown and from 1980s to 2000s, the concept of AI was started significantly. As the change of business concepts, lots of complexities come into force and business organization also remodeling their business strategies and with the help of advanced machine learning algorithms and AI tools the business firm can able to perform activities like furcating, data analysis and assessment of risk more accurately.

From 2000to 2024, these AI technologies were infused with natural language processing technology, enabling them to process and interpret human language and also generate desirable information. This used not only apply on Accounting Information System (AIS) but also it can apply on Accounting Professionals to predict future events were accurately.



*C. Application of AI in real challenges in Financial Services*

The application of AI performing several activities in the real-life situation. AI tools helps different business industries to perform their activities in an efficient manner by easily converting different datas into different acceptable forms of business decision making process. These applications are-

1) *Anomaly Detection:* This particular AI tools helps to detect different anomality such as financial crime, fraudulent transactions, spoofing in business trade, cyber threats etc.
2) *Sentiment Analysis:* It also capable to find out sentiments in a given text with its prevailing emotional opinion using natural language processing technique which uses AI to determine the emotional tone or attitude conveyed by a piece of text.
3) *Speech Recognition:* It can easily convert speech into text to improve your service with different group of customers interactions. Siri, Alexa, and google Assistant rely on speech recognition to understand voice commands.
4) *Financial Recommendation:* AI play an important role by providing highly personalized overview regarding financial decision-making process of different individual at the time of investment decision based upon there risk preferences, peer interactions, financial goals and more.
5) *Image Recognition:* Itcan also able to derive insights from images and videosto getting information for insurance claims processing and assessing damaged to different property like vehicles, real estate etc.
6) *Conversation:* In today's business world conversation among different customers is very much necessary before and after actual sales of different goods and services. AI perform this task very efficiently by delighting customers with human like AI powered contact center automatically. This process of communication is very much applicable for financial, commercial, educational and other types of services.
7) *Cybersecurity:* AI also able to detect different aspect of cybersecurity by continuously monitoring and analyzing different traffic to detect, prevent and respond to cyberattack and different threats.

*D. Significance of AI*

AI significantly uses in different areas for quick decision making as well as increasing efficiency in workings. Therefore the AI has significant impacts on various aspects like data analysis, which process huge amount of data within minimum time according to the needs of the users. In the present era AI-powered chat bots and virtual assistants also improve customer services in different sectors of organizations. In case of medical sciences the application of AI is very influential because in this case AI helps to diagnose different future critical diseases, develop personalized treatment plans and also helps to streamlines clinical workflows. AI also assists in scientific research, leading to new discoveries and also able to a deeper understanding of complex phenomena. Beside that it has also applicable on cyber security, environmental sustainability, improved decision making, innovative ideas through application of ideas, personalization etc.

## II. LITERATURE REVIEW

The impact of Artificial intelligence can be found extensively in literature, but there are certain contradictory views on the outcomes of AI adoption on accounting. More and more amount of automation and technological advancement significantly displace human resources in their work by 2025 and accountants also make decisions based on some outdated facts and figure but the automation of data processes always depends upon the minute information enable better grounded decision affecting the performance of business enterprises (Alex et.al.2014). There is a possibility that Accountants have 95% chance to becoming unemployed as machines play an important role in data analysis and also number crunching and similarly rapid growth of technological advancement some jobs are eliminated while others are created (Greenman, 2017). It is a perspective that Artificial Intelligence is a device's ability to do some particular activities that would normally be performed by the human brain, where it has the capacity to judge, comprehend relationship, and generate novel ideas (Chukwudi et al, 2018). The impact of AI in accounting is contentiously going on by the level of advancement taking place everywhere which will significantly reduces accountant place in the process of automation and it is a very challenging situation to for the accountant on this era to change themselves to the wide spread of automation in the industry(Chukwuani & Egiyi, 2020). The challenges and direction of Artificial Intelligence in case of big data analysis of education, research, policy formulation and the professionals from variety of discipline must engage in actual collaboration of AI and data advancement. So, collaboration approach is very important but the main problem is lack of vision of the group and lack of adequate knowledge and skills of the individual (Luan et. Al. 2020). The major technologies which are use prior and also able to implement as a form of AI-based solution that can be found in the market for natural language processing-Nuance, Cortana, Alexa, Alphasense, for Machine and deep learning –TensorFlow, Kensho, Microsoft Cognitive Services, for Artificial General Intelligence- Skymind,

IBM Watson, Accenture my Wizard, for Computer Vision- Clarify. Database Management System (DBMS), Cloud Computing and Enterprises Resource Planning (ERP)-all these are becoming part of modern enterprises. Big data, Blockchain and Machine Learning have warranted wider application of cognitive technologies in workplace. It is expected that soon every organization will be engulfed in a way or the other by the presence of AI( Zhang et al. 2020) This is a serious issues in AI where AI is important everywhere, because this is an opportunity in accounting. It may losses few accounting jobs; but alternatively, it will also open vast areas of accounting personnel to transform their role as an accountant to the accounting management by understanding AI which made a high-level accounting personnel (Pradip Kumar Das,2021).

### *A. Objectives of the study*

The objectives of the study are to find out –

*1)* Impacts of AI on accounting practices.
*2)* Impacts of AI on accounting professionals.
*3)* Impacts of AI on social well-being through the adoption of AI on Business entities.
*4)* To know the enhanced efficiencies of the different business organization through the adoption of AI.

### *B. Research Question*

The research question of this study is that whether Artificial Intelligence has significantly improved the business performance and societal values?

### *C. Research Methodology*

This study carried out a more in-depth research regarding the impact of AI on the accounting practices. Beside that this particular paper also carried out a research i.e. impacts of AI on accounting professionals. For this purposes a specific research approach has been used, by studying the relevant articles, assessment of existing literature to understand the level of existing information available related to the impacts of Artificial Intelligence on the Accounting Activities. In order to conduct this analysis on the existing information this paper carried out a qualitative analysis of the literature related to the Impacts of AI on accounting activities. Secondary sources of data for this study on the scientific filed were found by using different database like Elsevier, Taylor and Emerald from which some articles has been selected to understand the impacts of AI on accounting activities.

## III. RESULTS AND DISCUSSION

Artificial Intelligence is the actually a process of simulation of human intelligence by machine especially computer system. For this purpose some specific application of AI likes anomaly detection, sentiment analysis, speech recognition, image recognition, financial recommendations, Natural Language Processing etc. AI requires combination of software and hardware for establishing machine learning algorithm. Actually AI focuses on cognitive skills which include learning, reasoning, automation, creativity and innovation. With the adoption of AI technology the application of AI rises everywhere from household to commercial purposes as this technology can able to detect customer choices and behaviors. The business environment also changes significantly by the adoption of Artificial Intelligence on accounting, finance, auditing, management and taxation. The main purpose of accounting is to provide information in the most appropriate form so as to the users of accounting information systems can take decisions easily. So Artificial Intelligence actually procured the unstructured data in a structural way and also manage it in such a way so as to it can be used for the purposes of the users. Different types of accounting software also used by different firms for their business performance as well as for taking quick and strategic decision making.

The different specific application of AI on accounting which are determine by the critical analysis of existing literature as well as analysis of qualitative data for last few years by the researcher such as to determine the rate of depreciation on different fixed assets by the application of AI tools which means that AI will assists the organization to determine its rate of depreciation on the basis of market inflation for replacement of fixed assets. This will reduce the uncertainty about provisions for depreciation whether the rate is adequate or not based on human decisions. The major application of AI is that it will definitely tell us how much provision should be made based upon debtors characteristics. That is AI actually assists us to recognize debtors characteristics whether credit will be given by the organization make it profitable or not. Beside the application of above two fields AI not only keep records of book-keeping and preparation of financial statements for the company beside that it also help the organization to establish their financing policies and also to determine the cost of finance for the organization as well. So AI improves the financial decision making capabilities of the organization.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |

Determining the value of a share is a major task by every large scale organization. So with the help of AI the intrinsic value of share should be determined appropriately in order to safeguarding the stakeholder's interest. Without applying different rules for evaluating the value of a share the AI considers all the factors so as to a rational investor would pay for the stock, regardless of its current market price. There are some conventional methods of valuation of stock which is not consider company specific or market oriented risks, market volatility, inflation or interest rate changes or inaccurate cash flow projections. Due to this backdrop valuation of stocks is not at all satisfactory. Therefore application of AI assists us to valued closing stocks in a proper way so as to reduce the above criteria in case of financial reporting purposes. AI driven tools provide lots of decision making by accumulating personalized financial planning and advice to the different representatives timely and accurately. AI helps to detect and investigate financial fraud and discrepancies by overall assessment of business transactions during the period of observations.

## IV. CONCLUSIONS

Adoption of Artificial Intelligence is not a challenge to the accounting environment rather it is an opportunity to disclose its accounting overview to the different stakeholders who are engaged directly or indirectly in a sophisticated way. So this implied technology enhances the knowledge of the human resources widely for maintaining the books of accounts and also changed the accounting world significantly. Now, we are try to familiar with different AI technologies as well as to keeps records of every books of accounts in such a way so as to every single information can be obtained from this AI driven technologies.

If the accounting world can able to change in this way then the window dressing of different financial statements can be minimized and financial reporting should be ideal tools for decision making purposes. As such frauds and errors can also be eliminated.

On the other way if the accounting world changes their conventional accounting practices to AI driven accounting practices then it would highly impacts on accounting professionals. So accounting world can transform in a sophisticated method regarding decision making purposes. Therefore, it will positively impact on social well-being for the interest of different stakeholders as well as accounting users. To consider all such areas of applicability of AI on accounting practices on our existing body of knowledge regarding accounting, the different organization may helpful significantly towards the improvement of its overall business efficiencies. Different business organization like Air India, Infosys etc. already adopt AI tools to reduce complex problems in business operations.

## V. RECOMMENDATIONS

The recommendations regarding this approach of accounting is suitable when all the AI driven technologies are adopted by the majority of organizations in the accounting world for comparability, verifiability as well as for decision making purposes. Therefore, for AI driven technologies government initiatives are very much necessary for making long term capital investment as well as for conversing of accounting methods from conventional to AI driven technologies and also necessary to implement AI tool by the different business entities and government also required to take some initiatives to uplift the situation of the business world.

## REFERENCES

[1] Thakker, P., & Japee, G. (2023). Emerging Technologies in Accountancy and Finance: A Comprehensive Review. European Economic Letters (EEL), 13(3), 993-1011.

[2] Peng, Y., Ahmad, S. F., Ahmad, A. Y. B., Al Shaikh, M. S., Daoud, M. K., & Alhamdi, F. M. H. (2023). Riding the waves of artificial intelligence in advancing accounting and its implications for sustainable development goals. Sustainability, 15(19), 14165. https://doi.org/10.3390/su151914165.

[3] Rawashdeh, A. (2023). The consequences of artificial intelligence: an investigation into the impact of AI on job displacement in accounting. Journal of Science and Technology Policy Management. https://doi.org/10.1108/JSTPM-02-2023-0030.

[4] Rodgers, W., Murray, J. M., Stefanidis, A., Degbey, W. Y., & Tarba, S. Y. (2023). An artificial intelligence algorithmic approach to ethical decision-making in human resource management processes. Human Resource Management Review,33(1),100925. https://doi.org/10.1016/j.hrmr.2022.100925

[5] Manap, A., Sasmiyati, R. Y., Edy, N., Buana, L. S. A., & Rachmad, Y. E. (2023). The Role of Auditor Ethics as Moderating Variable in Relationship Between Auditor Accountability and Quality of the Audit. Jurnal EMT KITA, 7(2), 382-388. https://doi.org/10.35870/emt.v7i2.1040

[6] Marques, S., Gonçalves, R., da Costa, R. L., Pereira, L. F., & Dias, A. L. (2023). The impact of intelligent systems on management accounting. International Journal of Intelligent Information Technologies (IJIIT), 19(1), 1-32. https://doi.org/10.4018/IJIIT.324601

[7] Moll, J., & Yigitbasioglu, O. (2019). The role of internet-related technologies in shaping the work of accountants: New directions for accounting research. The British accounting review, 51(6), 100833. https://doi.org/10.1016/j.bar.2019.04.002

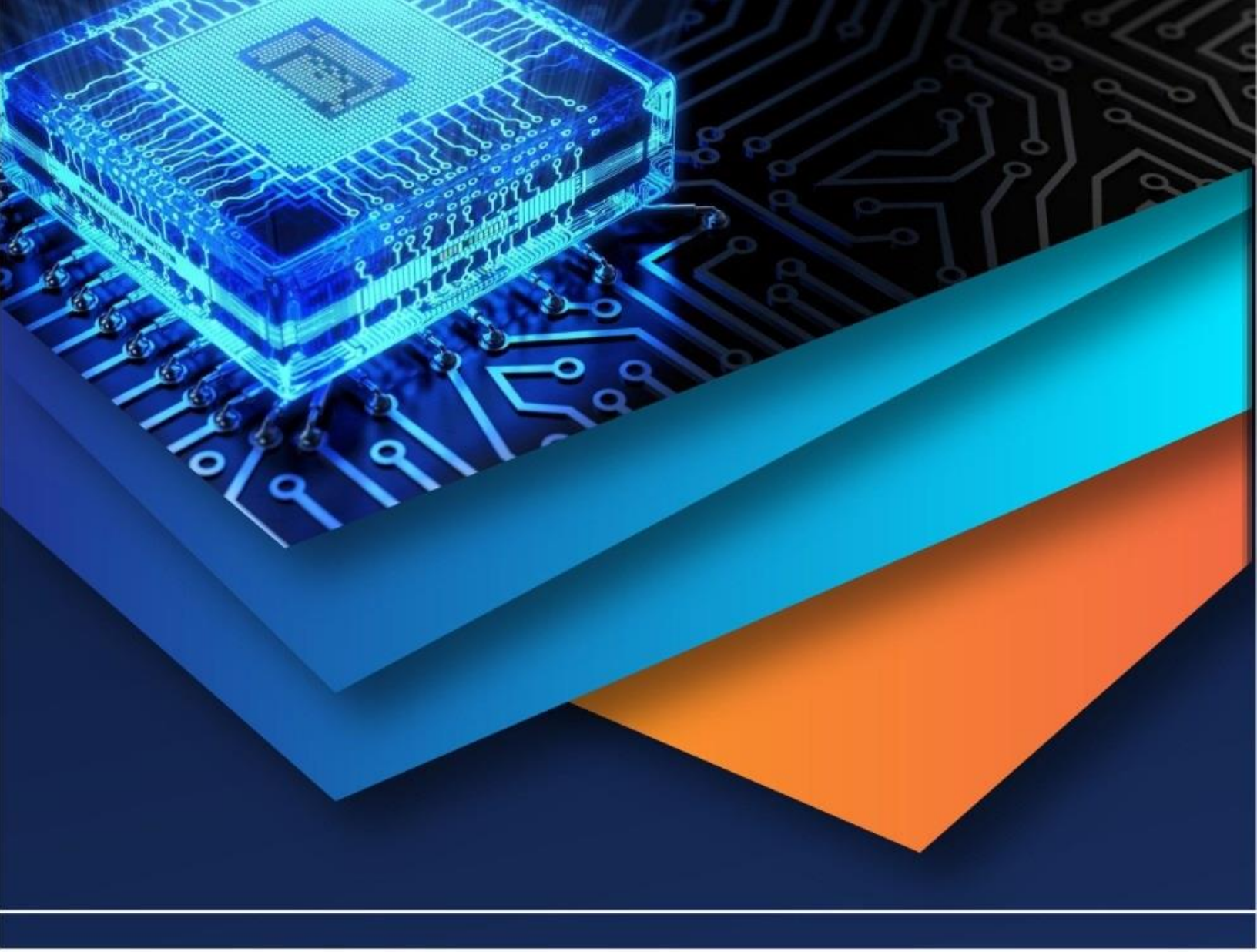
[8] OECD. (2021). Artificial Intelligence, Machine Learning and Big Data in Finance: Opportunities, Challenges and Implications for Policy Makers. https://www.oecd.org/finance/financial-markets/Artificial-intelligence-machine-learning-big- data-in-finance.pdf

[9] Chukwudi, O.,Echefu, S., Boniface U.,& Victoria,C(2018). Effect of Artificial Intelligence on the performance of Accounting Operations among accounting firms in South East Nigeria. Asian Journal of economics , Business and Accounting .

[10] Emetaram,Ezenwa,Uchime, Helen Nkem. Impact of Artificial Intelligence (AI) on Accounting Profession.( 2021).

[11] Greenman ,C.(2017), Exploring the Impact of Artificial Intelligence on the Accounting Profession. Journal of Research in Business, Economics and Management.(JRBEM).
[12] Vasuki, M., Victoire, T. A., Karunamurthy, A., & Priyadharshini, B. (2023). Harnessing the Power of Artificial Intelligence in Stock Market Trading. International Journal of Research in Engineering, Science and Management, 6(6), 167-182.
[13] Zhang, C., Zhu, W., Dai, J., Wu, Y., & Chen, X. (2023). Ethical impact of artificial intelligence in managerial accounting. International Journal of Accounting Information Systems, 49, 100619. https://doi.org/10.1016/j.accinf.2023.100619.
[14] Sutton, S. G., Holt, M., & Arnold, V. (2016). "The reports of my death are greatly exaggerated"—Artificial intelligence research in accounting. International Journal of Accounting Information Systems, 22, 60-73. https://doi.org/10.1016/j.accinf.2016.07.005.
[15] Payton, T., & Claypoole, T. (2023). Privacy in the age of Big data: Recognizing threats, defending your rights, and protecting your family. Rowman & Littlefield.

©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)