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Role of AI in the field of accounting: An Overview

[1]Dr.Neetu Singh Valecha,

[1]Assistant Professor,

[1]Shri Nakoda Parshvanath Jain Mahavidyalaya, Jai Narain Vyas University, Jodhpur

Abstract: The term artificial intelligence refers to the simulation of human intelligence processes by machines, especially by computers. The use of artificial intelligence is widespread in numerous fields, including expert systems, natural language processing, speech recognition, and machine vision. Artificial intelligence (AI) enables the processing and automated authorization of documents to enhance internal accounting processes, including purchasing, invoicing, purchase orders, expense reports, and accounts payable and receivable.

Keywords: Artificial intelligence , AI, Machine Learning , Deep Learning, Accounting

I. INTRODUCTION

Artificial intelligence refers to machine the ability to simulate human intelligence. AI may be applied to any machine that exhibits traits associated with human intelligence such as learning and problem solving. Artificial intelligence is intelligent because it has the ability to come to a rationalization that can most likely achieve its goal. ML, or machine learning, is another subset of AI that refers to the idea that computer programs can automatically learn from new data without human assistance. Such deep learning techniques enable this automatic learning through the absorption of unstructured data such as text, images, and video.[1]

The first thing most people hear when they think of AI is robots. Their minds go straight to the big-budget stories that have been weave about these machines taking over the world. Progress in artificial intelligence is rapid. They can learn and reason with the same complexity as humans, and may even take it a step further. Researchers believe

[1] Frankenfield, J. (2016, August 23). What is artificial intelligence (AI)? Investopedia. https://www.investopedia.com/terms/a/artificial-intelligence-ai.asp

that one day there will be machines that outperform human intelligence. However, others are skeptical because there are many value judgments to worry about.[2]

Technology is continuously growing and any benchmark for artificial intelligence will eventually be outdated. For example, optical character recognition is now a common feature of computers. Different industries use artificial intelligence in different ways. Some examples of this would be a therapeutic chatbot that engages with humans, a doctor using AI to diagnose a patient's symptoms, and an AI generating marketing content.

Some machines with artificial intelligence include computers that play chess and self-driving cars. Each machine must weigh the consequences of any action they take, and must account for all external data to make a decision about their next course of action. Chess serves as an example, where the computer system's end goal is win the game. Self-driving cars serve as another example, in which the computer system must do whatever it can to prevent a collision.

AI can also be used in finance. It is used to analyze financial activity, detect patterns, and flag anything out of the ordinary. AI is also being used to make the supply and demand for different securities easier to estimate.

II. ACCOUNTING AND AI

Accountants make sure that a business is running smoothly and efficiently through analyzing financial statements and paying on time. The sheer amount of human interaction in these tasks means that they take up a large number of hours while leading to the possibility of human error, as well. Accountants oversee business finances to make the company run smoothly and efficiently. Without accounting, there is a good chance for human error and economic devastation in the future.[3]

Recent trends have made artificial intelligence in accounting software, or AI, and made it available in accounting software. This is changing things for all industries but particularly the high-pressure accounting and finance sector. It's also speeding up tasks like payroll data, optimizing financial statements to be more accurate in just a fraction of the time.

[2] Frankenfield, J. (2016, August 23). What is artificial intelligence (AI)? Investopedia. https://www.investopedia.com/terms/a/artificial-intelligence-ai.asp

[3] (2020). Www.g2.com. Retrieved from https://www.g2.com/articles/the-role-of-artificial-intelligence-in-accounting

With the aid of AI, you can use machine learning to streamline and optimize accounting processes. This has hugely promising outcomes- organizations can save money while increasing their profits. AI gives insights to accountants, cutting their workload in half. Plus, AI can analyze large data management systems faster than a human.[4]

External regulations and laws need to be adhered to in the accounting world, and AI helps with this by monitoring documents against these requirements. AI is able to flag those documents with potential issues. Financial service companies are forking out 2.92$ for every dollar of fraud that still occurs and machine learning allows them to catch suspicious behaviour otherwise missed by humans.[5]

Business leaders understand that AI is essential to their success. Nearly 85% who have used AI are convinced it will provide them with a competitive advantage in the future. The main obstacle to AI adoption in the field of accounting is getting people onboard with the change. A study from the Boston Consulting Group and MIT Sloan School of Management found that nearly 85% of executives understand artificial intelligence will help their companies attain or sustain a competitive advantage.[6]

The accounting professionals who resist change will be replaced with AI, freeing them up to do the tasks they enjoy most. AI has made it possible for accountants to work with their clients and provide insights, which are usually the freelancer's responsibility. It just requires a mindset shift from the accounting professionals to accept artificial intelligence.[7]

In order to help accountants use artificial intelligence, it's necessary to provide training and any other necessary supports so they are able to best use AI. With advancements in AI and automation, accountants will eventually rely on these tools to save time. The technology is already sophisticated, but the software and systems available to them is expanding at a rapid pace. Accountants who resist this change won't be able to keep up with those who have the advantage of time and cost savings that AI can provide.[8]

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[4] (2020). Www.g2.com. Retrieved from https://www.g2.com/articles/the-role-of-artificial-intelligence-in-accounting
[5] Marr, B. (2021, July 2). Artificial intelligence in accounting and finance. Bernard Marr. https://bernardmarr.com/artificial-intelligence-in-accounting-and-finance/
[6] Marr, B. (2021, July 2). Artificial intelligence in accounting and finance. Bernard Marr. https://bernardmarr.com/artificial-intelligence-in-accounting-and-finance/
[7] GREENMAN, C. "Exploring the impact of artificial intelligence on the accounting profession". Journal of Research in Business, Economics and Management (JRBEM), 2017, 8(3): 1451-1454.
[8] ICAEW. «Artificial intelligence and the future of accountancy». London, ICAEW, 2018.

III. Applications of AI in Accounting

AI is also freeing humans up for more complex tasks. Accountants who learn to embrace the latest innovations in technology will be valuable in operations that need a sophisticated, knowledgeable accountant.

- **Monthly or quarterly close procedure:** Companies can use AI to pull numbers from various sources and then consolidate, merge, and analyze them. The more time a company has to plan, the less money they are likely to spend on issues that arise because they've been planning.

- **Procurement:** Many companies use tedious paperwork and different file formats. AI eliminates this problem by making the procurement process paperless and helping with price changes. Using APIs and machine learning, unstructured data can be processed and procurement processes can be digitalized without paperwork.

- **Accounts payable/receivable:** The existing system already has an AI-powered process for processing invoices. You can use this process to make accounting related tasks more streamlined, by sending the invoice for processing and allowing the system to automatically identify the code for it.

- **Audit:** Digitalization increases security by making it easier to track a document's user, time accessed, and location. Digital files can be accessed during an audit, making the audit process much easier. AI increases the accuracy and efficiency of financial audits, making it possible to audit 100% of a firm's financial transactions.

- **Expense management:** Using AI, the tedious task of checking and approving expenses can be much easier as machines can review receipts and expenses to make sure they are compliant with company policies.

- **AI chatbots:** Machines can handle common queries from users, such as when bills are due and your latest account balance. These tasks can be resolved quickly by artificial intelligence, made up of structured data and machine learning.

IV. Conclusion

AI is saving accountants time by freeing up their time to work with clients and discuss new services. With AI, accountants can use AI's ability to process data quickly to benefit the company. As the technology becomes more affordable and companies see a return on investment, AI is being implemented in a variety of scenarios.