

ARTIFICIAL INTELLIGENCE IN ACCOUNTING

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ABSTRACT

Artificial intelligence refers to the simulation or approximation of human intelligence in machines. AI is being used today across different industries from finance to healthcare. Many people consider Artificial intelligence and machine learning to be a same thing, however artificial intelligence include computer-enhanced learning, reasoning, and perception it encompasses the idea of a machine that can mimic human intelligence, which machine learning does not. In today's world AI is being used in several seral sectors for a vast variety of services. AI is also being used in accountancy and assurance sectors. AI-powered software can automatically categorize expenses, reconcile accounts, and generate financial reports. This saves time and reduces the risk of manual errors for firms. It assists an accountant and an auditor to perform their tasks in an efficient and effective manner. It is being argued that AI may replace some accounting jobs because many of the jobs previously done by humans can now be automated, AI has the potential to replace specific jobs in the accounting industry. Many experts argue that AI is not replacing accounting jobs but rather than providing an opportunity to accountants to shift from traditional tasks to specialised takes which the accountants can carry out effectively and efficiently by using AI. AI can provide useful insights to the accountants and professional experts which improves the quality of services provided by them to their clients.

KEYWORDS: Artificial Intelligence, Accounting, Human Intelligence, Machine Learning, Auditor.

Introduction

Artificial Intelligence (AI) as the name signifies itself is not the nature provided intelligence but man-developed and provided intelligence to machines by way of software. Due to being contrary to human natural intelligence, this is termed as Artificial Intelligence. It is a new technique to develop theories, methods, technologies and application systems for mimicking human intelligence. In other words, Artificial Intelligence is the simulation of human intelligence process by machines. Artificial Intelligence enables the machines to do the job demanding human wisdom rather than performing merely monotonous mechanical activities. It is the science of creating intelligent computer programs rather than making intelligent machines.

Artificial Intelligence (AI) requires a foundation of specialized hardware and software for writing and training machine learning algorithms. This field of engineering uses most advanced technologies for software designing and robots to think and act intelligently. It is combination of computer science and strong datasets. This system works by ingesting large amount of specified data, analyzing the data through set of AI algorithms, creating the expert system for correlations and using the generated patterns to make predictions or classification based on such data.

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Artificial Intelligence vis-à-vis Machine Learning and Deep Learning

Artificial Intelligence and Machine Learning are sometimes used interchangeably, but they are distinct. Artificial Intelligence relates to the similar task of using computers to understand human intelligence. It covers an ever-changing set of capabilities as new technologies are developed. Technologies that come under the umbrella of AI include machine learning and deep learning. AI encompasses sub-fields of machine learning and deep learning, which are frequently mentioned in conjunction with artificial intelligence and coined as AIML.

On the other hand, Machine Learning algorithms enables software applications to become more accurate at predicting outcomes by using historical data as input without being explicitly programmed to do so.

While Deep Learning, a sub-set of machine learning, is based on one's understanding of how the brain is structured. Deep learning's use of artificial neural network structure is the underpinning of recent advances in AI.

Application of Artificial Intelligence

The evolvement of AI has been passing through many cycle of development over the years and like other inventions, has witnessed many failure, disappointment and optimism as well. The technology is still growing everyday to meet out new challenges and further applications. It is infiltrating rapidly in every sector because of its character of being implemented in one's own unique way. The applications for this technology are growing every day because of its potential to change itself according to the requirement. Because of this, it's application and acceptability is increasing fast in every field e.g. defense, aerospace, education, medical, legal, accounts, finance, banking, police department, data security, transportation, industries, retail, gaming, agriculture, etc. More and more possibility of use of AI is being continuously explored for the reason that in some areas, even it can perform better and more precisely than human. Artificial Intelligence is moulding the world in an unparalleled manner due to it's numerous and varied applications.

Artificial Intelligence in Accounting

It's potentiality to process large amount of data much faster with more accurate predictions as compared to human capacity is increasing it's acceptability in every walk of life. AI technique opened the door for new horizons in the business, particularly where repetitive and detail-oriented task is more because of it's ability to process massive data sets quickly and comparatively with few errors. Quick access and making sense of massive data base is a key advantage that AI unlocks in the field of accounting. AI in accounting is primarily about data and automation.

Use of Artificial Intelligence in Accounting

- AI can be used for invoice preparation, processing, accounting and reconciliation through automatic collection of relevant data.
- AI can be used to identify irregular patterns by analyzing large volume of financial data for finding out financial irregularities more effectively.
- AI can be used to forecast real-time cash flow and to have real-time insights into a business's financial health through having quick access to enormous quantities of relevant financial data.
- AI can be used to manage working capital, to make investment decision, to enhance financial planning, to help in risk management, to identify potential threats and opportunity, to prepare budget etc. through predictive analysis of historical data and market trends.
- AI can be used to ensure timely compliance of tax and other legal regulations, tax planning, etc. AI can be used to check PAN availability of TDS deductee, to find out MSME creditors outstanding more than stipulated period, to identify the outstanding amount to supplier for more than one eighty days, etc.

Steps for Initializing AI in Accounting

- At the outset, those accounting processes should be identified and prioritized which would be most benefitted for maximum optimization.
- It is crucial task to choose appropriate AI technology amongst available numerous technologies e.g. machine learning, natural language processing, robotic process automation, etc. The available technology should be rationally evaluated to best meet the needs of the organization.

A cost-benefit analysis and compatibility test should be carried out while choosing the technology.

- Since, AI is a new concept, the AI savvy persons may not be easily available. It's a foremost need to make the staff understand about it's need and benefit, then educate and train them to integrate AI with accounting functions. The availability of trained persons, training facilities, experienced trainer, etc. should also be considered while choosing a particular AI technology.
- The great things almost always start small i.e. to start small and enlarge later is one of the fundamental to get success. AI should be first implemented for small and routine work e.g. data entry, invoice processing, etc. and then gradually to be scaled up with the increasing familiarity and acceptability to minimize challenges.
- A steady monitoring the system and regular evaluating the performance of accounting AI is must to ensure that desired results are being achieved. This also helps in improving the existing system as well as identifying the new areas of accounting where the technology can be implemented further.

Artificial Intelligence Tools for use in Accounting

Though, AI accounting tools have been around for years in some small elements e.g. MS Excel, MS PP, etc., yet there has been a remarkable increase in number of AI accounting tools lately, some of which are as under:

- **DEXT:** It filters the invoices, receipts, etc. to extract relevant data to eliminate the tedium of data entry.
- **Auto Entry:** It captures the data from financial documents, automates the process, categorizes transactions, syncs with accounting software, etc. It also captures totals and sub-totals, descriptions, unit prices, quantities, etc. and thus reduces the manual data entry errors.
- **Appzen:** It automatically reads and understands the documents, identify the violation of corporate policies, extracts critical information e.g. duplicates, out-of-policy, excessive expenses, etc.
- **BotKeeper:** It simplifies book keeping through automating an range of accounting tasks from data entry and expenses tracking to financial reporting.
- **SMACC:** It mainly aims at automation of invoice data capture, invoice processing, extracting the data from unprecedented invoices, etc.
- **Mind Bridge:** It analyzes massive amount of data, generate reports on financial transactions, identifying anomalies, potential fraud, etc. by its analytics capabilities.

Artificial Intelligence Integrated Software

Accounting Software have already made accounting job immeasurably easier but traditionally they have been about recording and processing financial transactions in real-time. But, now-a-days, AI-integrated software predicts future financial scenarios, offering a predictive edge by understanding the business behaviors and data patterns. Some of such AI-integrated software are as follows:

- **Quickbooks:** Automates a lot of back-office tasks, including cash flow forecasting, smart match reconciliations, etc.
- **Oracle:** AI is joined by Machine Learning for elite enterprise resource and financial planning.
- **Fresh Books:** Uses AI for accounts payable automation and a variety of automation around other business processes.
- **Zoho Books:** Covers the gamut of banking, inventory management, invoice management, etc.

Advantages of Artificial Intelligence in Accounting

AI's ability to automate data entry, provide precision in processing vast data base, generate advanced data analysis, enhance financial reporting, detect fraud and support visual assistance has brought revolution in the accounting field. Some of the advantages are as under :

- AI increases efficiency and productivity by making easier the repetitive data processing in lesser time.

- AI minimizes/mitigates the human error through automation resulting in enhanced accuracy and efficiency.
- AI helps in quick analyzing transactions, cash flow, budget, data, etc. through AI algorithms to identify trends, patterns and errors for more accurate forecast and prediction.
- AI saves money and time by automating routine tasks.
- AI makes the data management, budget preparation, inventory management, accounts payable management, internal accounting process and audit procedures less hassle.
- AI is greatly instrumental for secure information management, risk assessment, compliance enforcement and adaptation to global standards.
- AI provides real-time analytics, fraud detection, and predictive analysis, helping business preempt financial risks and make data-driven decisions.
- AI uplifts the people in accounts by making them perform higher-skilled work than before and turning them to more creative work.
- AI has around-the-clock capacity to work.

Challenges of Artificial Intelligence

As it is said, one may not be perfect always, despite of all the benefits, integrating AI in accounting also comes with challenges.

- **Cost:** It requires initial high investment not only towards software but also to either buy new system or to upgrade existing system adaptable to the new technology.
- **Technical Knowledge:** It demands highly specialized technical knowledge and expertise as well as constant training and education to keep pace with recurring changing technology.
- **Data Quality:** The performance of AI heavily dependent on quality, completeness, accuracy, etc. of available data. The principle of 'Garbage in Garbage out' also applies with it to some extent.
- **Employee Resistance:** In general, human being resists the changes because it brings them out from their comfort zone. Requirement to update themselves, train and educate themselves, fear of job displacement, incapacity to adapt new changes, etc. may be the main reasons for employee's resistance and integration of AI in accounting system is not a different one.
- **Data Security:** Ensuring compliance with privacy regulations, implementing robust security measures and safe handling of sensitive financial information is big challenge. As rapidly the hype around the use of AI took off, conversations around ethics become critically important.
- **Accuracy of AI Algorithms:** Ensuring the accuracy and unbiased nature of AI predictions is an inherent risk in as much as AI algorithms are only as good as the data they are trained on.

AI is rapid growing, constant-changing and ever-adapting technology but it can't be a substitute of human being because of it's inability to perform essential human skills such as judgment, communication and critical thinking. Though, AI is not a replacement for human creativity and innovation yet it can certainly lend a helping hand.

References

1. en.wikipedia.org
2. www.businessworlddit.com
3. www.mckinsey.com
4. www.techtarget.com
5. internalaudit360.com
6. <https://speechify.com>
7. <https://cloud.google.com>.

