Artificial Intelligence in Accounting Practices

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Abstract: *AI-Artificial Intelligence is a breakthrough in the field of computing, in present day scenario AI has already established in every industry vertical and its applications are growing at rapid pace. AI is significantly contributing to Science& Computing, from Drug discoveries to Biotechnology to Cyber security. Implementation of AI has contributed to a significant improvement in efficiency across all the sectors. These developments have obliged to adopt & embrace AI in the domain of accounting for better efficiencies. The domain of accounting/audit services/tax services/wealth management deals with significant amount data to analyze& complex processes to make decisions; this can be leveraged by implementation of AI to bringing efficiencies. This paper analyzes some of the areas of AIs implementations, barriers, and framework for the future efforts of inclusion of AI in accounting domain.*

Keywords: Artificial Intelligence, Machine learning, Accounting, Finance

1. Introduction

Artificial Intelligence is programming the computer to do what human minds can do. AI – Artificial Intelligence – The human quest for innovating and creating an artificial brain that can think and take the decision was a logical next step after inventing the computing machine. Thus, the human race was started figuring to answer, "Can a machine think and make decisions as humans do?"The exponential leaps in the technology have paved ways to create a computing machine that can think wise and take decisions or help in making decisions. The term Artificial Intelligence coined by John McCarthy along with Marvin Minskly (MIT), Claude Shannon (Bell Labs) and Nathaniel Rochester (IBM) in 1956.

1.1. Difference between AI & ML

Often these two terms are used invariably. However, Machine Learning is one of the ways to attain Artificial Intelligence. Machine deals with analysis large data sets to create algorithms or identifying& exploring patterns in the data. Artificial intelligence is the process of making computers/machines to perform certain tasks in SMART way, that until recently, we thought required human intelligence. AI is making quick roads in to our day-to-day routine and we have been using such applications without knowing them as AI products; "Spam filters" in email, virtual assistants like "Alexa & Siri", "Chatbots", "Car parking assistants", "Driverless cars", music recommendations of "Spotify" and "Google music "are few examples that we often use in our daily life.

1.2. AI Adoption

The adoption of AI depends primarily on two prominent drivers.1. Technology 2. Business needs. The adoption of AI needs to efficiently deal with large sets of Data, which is structured and unstructured including but not limiting to Videos and Images and Text. To analyses such vast amounts of data and drawing meaning patterns, system needs high computing powers and efficient Central Processing Units (CPUs) and Graphics Processing Units (GPUs). The Cloud technology is already taken industry by storm. These massive computing powers when coupled with cloud technologies, which enables the ease of access, the industry/business communities can implement them in Real-time leading to evolution of new pathways that benefit both the industry and the end user.

2. Scope of AI in Accounting

Several industry verticals, such as Aviation, Transportation, Online Services has undergone rapid changes with the introduction of new technologies, however the accounting process has not seen many path breaking changes in the way the Accounts are maintained, the double entry systems and financial statements are still seen as the only way in the way we deal with commerce and business. However, with the proven success of AI enabled services, this scenario is changing rapidly in accounting firms too. Several accounting firms in the world are quickly adopting and embracing this technology to steam line their accounting services. AI can help the accountants by automating several mundane processes, thus freeing up the time with the account managers to enable them to make more complex decisions and build client relations. Let us say a monthly revenue report is a deliverable for a client and as an accountant one must need to dig in to lot of spreadsheets, doing calculations, making tables, making graph and a presentation, highlight the data points that needs your attention. What if all these tasks are automated and a final PPT gets created by click of a button?? This is what exactly the AI intended to do, this will save more time for you as well as your client. This will free up a lot of time for accountants/finance auditors, which can be used in higher value skills such as building relations with stake holders and winning over the potential clients.

RPA (Robotic Process Automation) is the specialized technique that is used to automate repetitive tasks including document analysis and automated reports generation. The AI process can be applied and already making inroads in several areas of day-to-day accounting process such as automated bookkeeping, fraud and risk management, automated bills receivables and bills payables, mailers, automated procurement, invoice processing and reporting. There are several accounting processes that are completely getting automated and moving towards AI enabled services such as tax auditing, payroll process and online banking. As per Business Insider report implementation of AI can give

cost saving opportunities to Finance Industry, including banks, tax agencies and credit unions to tune of $447 billion by 2023. As per the Finextra-Opentext survey report following key areas of business have highest potential of growth to be achieved through implementation of AI.

Figure 1: Source: Finextra-Opentext Report

Not only automating these repetitive tasks, but AI can also flag any anomalies in the process and bring to attention. This will help Accountants to quickly identify the errors and or frauds if any, in the processes. Automating such repetitive tasks will certainly improve the efficiency and enhance the decision-making process. One of the prime aspects of AI is apart from automating the repetitive process; it can draw patterns with the data and can analyze and validate the database on the trends and the historical data. These analytical capabilities of AI will help in auditors in auditing process to catch fraudulent practices, provide more insights of the data.

3. Barriers to Overcome

Despite of these several benefits there are still several roadblocks in the adoption of the AI into organizations. The primary barrier for AI adoption is the Mindset and resistance to change as seen in other industry verticals. To help accountants to adapt to this new AI technology, it's vital to educate them on the benefits of AI and provide appropriate training and workshops to make them understand how AI can be helpful in their day-to-day operations. Instead of worrying on what AI can do to us, one should focus on what we can do with AI. The second most important barrier is the inhibition of job losses because of the automation; however one must realize the that even if the machines can generate all reports and perform audit related tasks, there must be someone needed who can draw a meaningful conclusions based on the data/reports. Human intervention in some of the areas of Judgment process and complex decision making is inevitable.

In fact with the introduction of AI, the roles of accountants, auditors and finance managers will take a significant shift to Consulting and Advisory roles. This can help in their job enrichment as well help focusing more on broader tasks such as financial planning, budgeting, capital optimization, process improvements &overall growth of the company. The long-term benefit of AI implementation will lead to increase in productivity stimulate growth in business and create higher value add solutions by work force will outweigh the employment concerns or Job losses. Change is inevitable and no industry or sector is immune to that. Instead of allying with fears, the accountants and accounting industry must embrace this change whole heartedly comprehending AI technology as a partner which will help them to be future ready.

The third significant barrier is availability & affordability of such AI programs. The cost implications, the quality of data and lack of talent are few roadblocks that the industry verticals have to overcome to capitalize on AI benefits. The Big multinational accounting firms can afford to create their own AI applications, but small and medium business organizations do not have similar resources. However, with the rapid competition in the AI technology today there are several AI enabled accounting applications available to SME too, some examples of such applications are QuickBooks, Xero, Zoho books, & OneUp.

4. Conclusion

There are no two views about the benefits that accounting firms can benefit from automated software coupled with AI capabilities. In the present era of evolution of technology, it is evident that, those organizations that are quick to adopt new technologies and embrace the change are more successful. AI is bringing waves of rapid changes in the process of accountancy too, the availability of various tools and applications that support accounting practices are growing at a rapid pace. The organizations that do not catch up with these AI trends will lose the competitive advantage and will not keep up with the other firms that adopt the AI in their accounting practices.

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