



EMBRACING ARTIFICIAL INTELLIGENCE FOR AUDIT

Advocates of Artificial Intelligence (AI) constantly speak of a time when technology will be capable of auditing 100% of a company's financial transactions. These visionaries foresee the day when AI will enable auditing to be a continuous and real time process as compared to the current prolonged exercise requiring a pool of human resources, working overtime after the end of each fiscal year in order to meet statutory deadlines.

So what is AI?

AI in the broadest term is the theory and development of science that enable a computer system to do things that require intelligence when it is done by human. It is a science and technology based on disciplines such as computer science, biology, psychology, linguistics, mathematics and engineering. A major thrust of AI is in the development of computer functions associated with human intelligence such as reasoning, learning and problem solving. AI technology, also known as cognitive technology is able to extend the power of information technology to task traditional functions performed by humans. They enable users to break prevailing trade-offs between speed, cost, quality and increasing productivity. The subset of AI is the concept of Machine Learning (ML) that includes abstruse statistical techniques that enable machines to improve at tasks with experience. This includes Deep Learning (DL) which composed of algorithms that permits software to train itself to perform tasks, like speech and image recognition, by exposing multi-layered neural networks to vast amount of data.

Embracing AI in an auditor's professional routine would enable auditors to automate tasks that have been conducted manually for decades. As a result, auditors can be liberated to focus on enhancing quality by evaluating higher level analytics, spending more time exercising their professional judgment and providing greater insights.

An area in which auditors are taking advantage of is the benefits of using cognitive technologies for document review. In an audit, it is often time consuming for auditors to peruse through and review stacks of documents and contracts to extract key terms which traditionally has been a manual process. With cognitive technologies, auditors are now able to deploy processes such as "natural language processing" (NLP) technology that reads and understands key concepts in the documents. With the application of ML technology, it is possible to train the system on a set of sample contracts so that it learns how to identify and extracts key terms.

Contract review powered by cognitive technologies can now take a fraction of the time as compared to what it used to be. It will now enable auditors to review and have access to larger samples (even up to 100%) of the documents. It makes it possible to do lightning fast analytics-automating the separation of documents that contain escalation clauses from those that don't, for instance, and visualising the degree of variability from a standard form across a population of documents. Auditors would therefore have access to study the totality of a business in an efficient manner.

Traditionally, the workflow for audit confirmations has been manual on the basis that is prepared, authorised, distributed, collected, evaluated and if necessary reconciled. This process could be streamline as machine learning technology could be used to recognise, extract and process from the many supporting documents typically attached to a confirmation, automatically confirming the transaction without significant intervention. The application of NLP could also enable the system to handle anomalies and exceptions automatically by reading and understanding free-form textual responses from counterparties and recommending appropriate actions.

It is often said that compared to humans, machine excel at processing such repetitive and time consuming tasks as data acquisition. They are capable of reviewing massive quantities of data, evaluating what needs to be checked in an audit and also recognising anomalies in the data. AI-enabled solutions can also effectively identify such things as an unusual spike in orders from a particular geography, an exception set of expense items recorded by an individual or unusually favourable terms contained in a contract or equipment leasing agreement recorded for a specific supplier.

Another area where auditors could automate tasks which was previously done manually is the counting of inventories. The use of Smartphone cameras and computer vision to automatically identify and count items, spot patterns and flag anomalies are already in place and used in the healthcare industry.

By using cognitive technologies, auditors may soon be able to provide clients with new ways to uncover risks. The use of ML and NLP technologies could make it possible to scan financial statements and suggest risks associated with the text while linking disclosures to Companies Act, other Acts of Parliament, Securities & Exchange, analyst reports and even social media sentiment.

Data acquisition is at the heart of auditing. Auditors need to obtain raw business data before they can perform an “audit” – it checks the accuracy and alignment of data sets like purchase orders, billing, receivables, payments, expenses and compensations. Further, auditors regularly consider external data sources to understand risks, plan the audit and confirm company assertions. To incorporate AI into their audit methodology, auditors will need to understand systematically how those data are structured; how they differ from one industry, client, or source system; and how to transform the data reliability for use in their solutions.

As such, human values remain at the core of an audit and embracing AI is indeed a step forward in the way the audit profession have evolved. This will continue. Using cognitive technologies to evolve in audit processes by making it smarter, more insightful and efficient is just another way the audit profession is innovating. As technologies evolve, an auditor’s job of the present and future would increasingly require a combination of AI and a human being who has expertise in the field. Auditors will increasingly be required to understand the relevance of AI data-mining and analytics to be a valuable and integral part of the business.

If you wish to understand more on Artificial Intelligence for Audit, please feel free to approach:

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