THE CONTRIBUTION OF ARTIFICIAL INTELLIGENCE TO FUTURE ACCOUNTING

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Abstract
The repetitive and automated nature of many tasks in accounting requires a change and adaptation of the tools that artificial intelligence gives us, for example, machine learning models of data can significantly reduce fraud, improve trust, increase accuracy and efficiency.

There is no doubt that artificial intelligence and automation will revolutionize the way we work. But how will this affect one of the world's oldest professions? Accounting is a profession that requires years of training and practice. It is easy to believe that the field of accounting is immune to major transformations, yet we are at a fundamental turning point. The repetitive and automated nature of many accounting tasks suggests it's time for change.

The objective of the article is to determine whether machine learning models applied to data can reduce fraud, improve trust and increase compliance.

The juxtaposition of artificial intelligence technology and the field of accounting places the profession at the center of an exciting new era. This creates the potential to do more with the limited resources we have, administrative tasks are automated, accountants can use their time and energy for creativity, analysis and interpretation of accounting data that will bring real value to the economic entity.

Keuwords: *inteligența artificială, contabilitatea, schimbare, automatizare*

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Introduction

Accountants receive data that they normally process in a computer. From these, the system generates new data and instructions, such as paying or issuing an invoice. The data is also used and verified in numerous financial and management reports. These reports are then filed or analyzed to use the data to make decisions about the future development of a business line or product. This may mean that trends in the data repeat themselves in different inputs or change with the market. The presentation of what the finance department does is greatly simplified.

Artificial intelligence is a field of computer science focused on developing intelligent machines that can act and react like humans. The advancement of automation in finance departments has been revolutionary, but has always depended on fixed instructions originally programmed into the tool. Artificial intelligence is being developed to incorporate the ability of two new fundamental factors: learning and problem solving.

Artificial intelligence is good at automating repetitive tasks, increasing accuracy and efficiency, and uncovering hidden insights and trends. We can interpret the best way to get a response and learn the routines that get the best result. This way we can automatically upload documents, understand the entries and classify them into the correct accounting codes that never wear out and make no mistakes.

As we move forward with the application of artificial intelligence, we see three clear areas of benefit to the accounting profession: invisible accounting, continuous auditing, and active reporting. This will give companies the ability to capture trading activity in real-time, perform ongoing reconciliation and adjust such as commitments throughout the month.

Artificial intelligence enables the elimination of repetitive tasks from an employee's daily workload and increases the amount of data available at hand.

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One of the real values is the time saved by the user. Although users are free to create up to 300 rules per account, small businesses typically need five or six to reconcile their basic accounting functions.

Artificial intelligence can also significantly reduce financial theft and minimize accounting errors, often caused by human oversight. The growth of online services has brought several benefits, but it has also created new avenues for financial fraud. The chances of a fraudulent payment getting through the network increases as the volume of data increases.

In this way, AI and accountants can work together to provide a more predictive and strategic service, using available data to detect potential problems before they occur.

1. Review of the scientific literature

As a result of the literature review carried out in this study, it was found that in the last twenty years, technology has advanced at such a rate that many functions in an accounting department have disappeared: a combination of artificial intelligence and automation has the ability to take over many of the tasks that would normally be performed by a professional accountant.transaction-based accounting with little or no human involvement. The process is almost flawless, without errors, and when errors occur, the system has the ability to learn from them so as not to repeat them. Reports can be generated and sent to the appropriate people with automatic tracking and escalation if required.

Auditing is another fundamental part of accounting. Historically, a junior auditor might be sent to the farthest corner of the warehouse to do an inventory count—opening boxes, climbing stairs, and asking the supervisor where a particular part or piece of equipment could be found. These routine tasks are becoming more sophisticated, and large companies are testing drones that use artificial intelligence and image recognition to analyze information and automatically upload and transmit this data to a central office. Major accountancy firms are spending big in the face of an increasingly competitive market and a tightening stance by regulators on the profession's failings.

The challenge of economic survival is not only to accept these changes, but also to capitalize on them. The history books are full of companies that couldn't adapt. The inability of such companies to recognize and capitalize on changes in the way we operate is well documented. The same is true in accounting.

Some challenges to change may arise in the very short term. Therefore, it is vital to analyze and make decisions quickly. To do this, we need to be constantly in touch with market trends and anticipate what is coming our way. In addition to defining a very flexible long-term strategy that allows us to adapt to changes.

Looking at the future aspects of incorporating artificial intelligence, we discover that it has its limits. He lacks reasoning and intuition and always will. As with automatic cars, in this world where "there's always someone in charge" there is still a need for someone to be held accountable if things go wrong. Accounts should always be reviewed, decisions should always be made with context in mind, and while more and more data and analysis will become available, someone must determine exactly what needs to be analyzed, what the underlying intuitive reasons are, and keeping despite all this, to decide what needs to be done. We can say that many of the repetitive tasks of everyday life will be taken over by AI.

All this leads to the need for professional accountants in two different fields.

The first focuses on the process; ensuring that the proper procedures are applied consistently and then flow correctly through the system for a consistent and accurate result.

Second, those that will continue to be increasingly integrated into business collaboration functions that will help take all of this additional information that will be available and translate it into meaningful business insight.

Many of the most in-demand jobs today did not exist in the previous generation and, looking into the future, children starting primary school today will surely work in jobs that do not exist today.

Artificial intelligence is everywhere in our everyday life but also in our professional life. Artificial intelligence and accounting go hand in hand.

Process automation, predictive analytics and fraud detection are three of the areas where artificial intelligence is being used in the accounting department.

The capability of IT tools makes it possible to collect, store and correlate millions of data with each other in real time. This is how "Big Data" can be defined. Artificial intelligence then makes it possible to carry out a trend analysis that is even more accurate as it is based on a large volume of data. In other words, the Big Data tool traverses thousands of pieces of information. It then establishes correlations, finds similarities, and identifies anomalies.

Artificial intelligence thus could detect, within seconds, certain accounting and financial errors and anomalies. It identifies and reports fraud in the accounts of a company or in the consolidated accounts of international groups.

Fraud detection is a form of analysis. Therefore, artificial intelligence can work for all areas where data is transited. His ability to correlate a wealth of information allows him to find similarities and anomalies. AI can also be used to establish trends and even represent weak signals of future trends. This is called predictive analytics. In the financial field, predictive analytics finds its place to evaluate the return more finely on investments. Whether for strategic plans, to anticipate management behavior or the financial health of companies.

Artificial intelligence is a real contribution to the accounting and finance sector. Automating the "low value added" electronic tasks of entry, email, filing, frees up time to focus on the core of the accounting profession, auditing, financial analysis, as well as advising and client relations. The other benefit is precisely to refine these analysis and audit positions to provide faster and more relevant strategic advice.

Regardless of the field, artificial intelligence can be used to analyze large amounts of data at speed and at scale. It could detect system anomalies and optimize workflow. Finance professionals can use AI to help make decisions based on actionable insights derived from customer demographics, past transactional data, and external factors, all in real time.

Companies can use the data to make cash flow forecasts, predict when the business might run out of money, and take steps to protect themselves in advance.

The accounting profession is modernizing and becoming increasingly sophisticated. While the funding rules remain the same, the rules about how the work is done are changing.

Accounting specialists receive data and process it, usually in a computer system, which in turn generates more data and instructions. These instructions can consist of paying or issuing an invoice, the rest of the data being entered into a series of financial and management reports for analysis. These reports are archived or analyzed to make decisions about the future direction of a company or product. This could sometimes mean that trends in that data can repeat themselves with different inputs or be changed to reflect a change in the market. This is, of course, a very simplistic view of what a finance department does. For a financial or business leader it is also important to know how they can make all this more agile with greater precision.

Artificial intelligence can add two new abilities to simple RPA (Robotic Process Automation) applications: self-learning and problem solving. These intelligent RPA applications can thus be used in a bounded area to solve problems and enable end-to-end automation of business processes even for non-rules-based processes.

RPA applications that are equipped with "smart" digitization technologies can also perform cognitive tasks and systematize unstructured data sets (big data). These applications are also known as Smart or Intelligent Process Automation (short: SPA or IPA) applications. By observing and recognizing patterns, self-learning IPA applications can perform less rule-

based and more complex tasks and solve special cases. For example, you can learn how to classify data by observing an employee's decisions.

Using natural language processing, software bots would be able to convert natural language or text into digital form and could also process unstructured data, for example contracts or emails with machine learning algorithms and process steps from downstream, such as forwarding to responsible employees.

Chatbots could be used to create an intelligent interface between people and certain information or services. Employees, but also people outside the company, such as customers, suppliers, etc., could give natural language instructions to the chatbots.

The advantages of chatbot speech recognition and processing can be implemented very quickly for simple questions or tasks (account balance queries) by connecting keywords to associated databases.

For example, travel expenses can be entered by employees as a text message in a messaging application, the text message is forwarded to an RPA application as digital information along with an image of the receipt, which reads the corresponding information and posts it into the system. For both the employee preparing the travel expense report and the accounting department, the time and effort previously spent on recording it is no longer necessary. In combination with blockchain technology, necessary authorizations can also be verified and compliant remittances can be made. The quality of chatbot dialogue currently needs improvement, but they will continue to develop and will also be able to express emotions.

It would also be conceivable to use artificial intelligence to perform the inventory. Instead of employees, technical devices can be sent to the warehouse to take stock. For example, drones equipped with artificial intelligence and image recognition can automatically assess the quantities and condition of the asset and transmit it to the intelligent RPA application, which records the values in the ERP system. Assets that cannot be clearly valued by artificial intelligence are valued by humans. Artificial intelligence learns independently from observed decisions and can make independent decisions in similar cases in the future.

The same artificial intelligence can also support financial control, and would mean a quick and automatic evaluation of large amounts of data from different areas of the company. With the help of machine learning algorithms, patterns can be recognized in real time. Statistical-mathematical forecasting models are created based on training data to make predictions such as claims expenses. Artificial intelligence can thus support controllers in planning.

The limits of application in accounting, especially in the field of predictive analytics, are that decisions derived from algorithms are not fully understandable and do not have the transparency required in accounting.

In any case, accounting employees should compare the results of artificial intelligence with conventional methods.

In addition, the exclusive use of smart technologies to find solutions but also to make decisions - in addition to technological resources - would require a change in values within the company that allows or even prefers digital technologies as decision-makers.

2. Research methodology

This article looked at how technological advances are influencing the accounting of the future. How will artificial intelligence influence the accounting profession? I first did a lot of research on the Internet and accessible sources in my personal library to find as many articles on this topic as possible. I realized that there were several scenarios set for the future of this profession with the advent of artificial intelligence.

Some of the readings talked about a transformation of the profession due to a real collaboration with technology that will make it possible to increase productivity, while others, rather, mentioned a significant wave of technological unemployment and the disappearance of

many jobs. I looked for some examples of the use of artificial intelligence in accounting and various companies that offer online accounting software or services.

I chose to draw up a questionnaire and conduct semi-structured interviews to have a more open discussion. The questionnaire is composed of 36 questions divided into 3 main parts, namely general questions about artificial intelligence, questions about the use and implementation of artificial intelligence in companies, and finally questions related to artificial intelligence and accounting.

The first part allows me to see the feeling and trust that people have towards artificial intelligence and if they find that it can bring something beneficial to their work.

The second part allowed me to analyze since when artificial intelligence is really used, if companies develop their own software or if they turn to an external company and if they continue to invest in this technology.

In part 3, I try to find out what accounting tasks are being outsourced to artificial intelligence and whether this saves time and increases accuracy. Because of the last questions, I'm looking to know if people think the accounting profession will change or disappear, and what potential changes they expect.

As my work progressed, I realized that RPA existed and that it was closely related to the use of artificial intelligence.

Therefore, I have chosen to integrate this new notion into future research. The last step of the work consisted of analyzing the answers collected to see how artificial intelligence is used and what it brings concretely to companies. I also wanted to explore the issue of the demise or transformation of the accounting profession.

3. Results and Discussion

The new division of labor between humans and AI makes technological processes future-proof. Tax authorities, for example, are interested in accessing companies' systems in real time and monitoring their accounting that way. Companies that still use manual processes are no longer competitive in this future. That is what Artificial Intelligence means in accounting, it is an absolute must.

In the future, routine tasks and automatic data processing that have already been completed will be assigned to software that can handle such tasks with great precision and speed. Human resources - which are becoming increasingly scarce due to demographics and the tight labor market situation - become teachers for artificial intelligence and retain sovereignty over the final decisions. At the same time, specialists have more freedom to work creatively, innovatively and shape the future of their companies.

So far, only a few financial departments have relied on artificial intelligence. But the financial accounting profession will change significantly. In industrial companies that are changing with the times, digital technologies such as artificial intelligence have long arrived, intelligent sensors monitor production processes, robots assemble complex products in seconds, warehouses are organized independently without human intervention. A note of the future blows through the production halls.

Unfortunately, this does not happen in the financial field, yet. In accounting, finance departments are seen as pioneers, but when it comes to automation, they are often years behind operations. And especially in the accounting of medium-sized taxpayers, there is still much that is done manually that could just as easily be done by an automated system.

The use of artificial intelligence in accounting is becoming a necessity. A shortage of skilled workers and higher demands from tax authorities, investors and the public have put corporate and mid-sized companies' accounting under pressure to become faster, more accurate, and more efficient in the future. Perhaps the biggest driver of automation is the growing volume of financial data. At the same time, the complexity of data management itself is increasing.

Medium-sized businesses will no longer be able to ignore change for a long time if they do not want to risk being left behind in the competition. And just as the job profiles of many manufacturing employees have already changed as a result of digitization, the job description of a financial accountant will also change, and accounting activities will shift from humans to machines.

Apparently, it is easy when you consider the complexity of the international environment, or in the wave of invoices you have to identify those that require a special accounting treatment, such as leasing or assets under construction, or that are simply wrong. An AI-based solution can already make this much faster, more efficient and less error-prone.

The accountant cannot keep up with AI, because it can create thousands of invoices per day and at least at the same quality as the work of an accountant. In this area of accounting, AI corresponds to increased productivity. The excessive costs of a new IT infrastructure, which many companies fear when introducing automation, do not exist. The only thing that matters here is the data volume.

Conclusions

In conclusion, accounting professionals of the future will need to know systems, solve problems, have solid knowledge of their field of activity and be able to adapt to change. Companies will need to support their finance teams in this transition, because with so much information available, the winners will likely be those who can best market this data.

Due to continuous progress, most large accounting firms use artificial intelligence when making decisions.

The use of artificial intelligence in the field of accounting leads to cost savings and operational efficiency, providing accuracy and speed, advanced reporting systems, large volumes of data, ensuring that it is analyzed in a very short time.

With its advantages and disadvantages, artificial intelligence is advancing rapidly. There is no doubt that this progress and development will continue in the future. For this reason, in order to adapt to the new system, the necessary requirements in the fields of accounting, making changes and ensuring the adaptation of professionals to this changing situation will make great contributions to the development of the profession in the future.

Systems based on artificial intelligence offer companies an alternative to outsourcing financial processes. That way, not only does control of the data stay in-house, but so does the knowledge of how best to manage it.

Artificial intelligence has its limitations, it can only rely on past data, it does not follow future visions and it lacks intuition. It takes someone who makes decisions in the big picture and who also intuitively decides what should be looked at and why.

In modern finance departments, the accountant of the future will have more time for more complex issues because he will be freed from transactional activities. It moves from processing to verification, analysis and decision. In the future, AI will present people with facts that they themselves are not sure about the correct booking. The final decision then rests with the accountant or, after a certain number of automatic posts, the machine will present a report that the accountant will check to see if the machine made the right decisions.

Therefore, the new job profile will require more extensive qualifications than before. Because the accountant needs to be able to understand how his smart colleague works, where his strengths lie - and where the limits of technology are. On the one hand, accounting expertise will have to be even more specific and advanced. At the same time, accounting also requires specialists to deal with how AI works and data analysis.

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