

Use of artificial intelligence in the financial sector: the case of accountants

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Abstract

It is essential to emphasize the principle of perspective through technology, an essential lever in the growth cycle of the accounting profession that must be urgently adopted in the face of increasingly sophisticated technological advances. Professionals in this profession are witnessing the most dramatic changes. Machines are already performing tasks that were thought to be reserved for humans. The integration of computers and robots into the AI system in accounting firms will change the work of professionals, streamlining countless tasks and freeing accountants to focus on higher value-added activities. Accountants are using complicated systems that leverage artificial intelligence to increase the talents and performance of their employees in order to stay competitive.

To do this, individuals must be willing to adapt and learn alongside the changing technological age.

Thus, this study aims to determine the impact of the integration of artificial intelligence on accountants. Qualitative research with 20 accounting firms operating in major cities in the Kingdom of Morocco was also conducted using semi-directive questions.

Keywords: Accountants, Artificial Intelligence; Technology; Evolution; Business

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I. INTRODUCTION

The use of developing technologies such as artificial intelligence (AI), robotics, cloud services and many others is essential because they will have a significant impact on all economic sectors and affect the entire world; there is even talk of Globalization 4.0. Mathieu and Pluchart (2020). With the assistance of AI for customer insight, new production processes and advances in customer liaison management will be available. Therefore, the ability of companies to stay ahead of the curve and take advantage of developing technologies will be crucial. In other words, if they succeed in their digital transformation, they will have a huge advantage over their competitors.

New technologies, new work techniques, new digital tools, the changing environment, new legislation and the health crisis are pushing firms to adopt their work methods and intensify their digital transformation project. Accounting firms have not been left out of this requirement. Firms are forced to adapt and reinvent themselves as digital and technological revolutions continue to impact their work. Digitization is the first step toward artificial intelligence (AI). AI can be defined as the reproduction of intelligent machines that exceed human mental capabilities. This implies that AI must be able to perceive and think about the world, as well as speak, read and calculate. This has led to (CHAIBA, Azeddine)

The rise of AI in the accounting sector cannot be disputed. At the same time, we are witnessing a technical breakthrough and a revolution in the way people use technology.

In recent years, there have been many efforts to design sophisticated systems using artificial intelligence (AI). The goal has been to improve the performance of financial investors and auditors in order to bring more value to companies and boost the quality of investments and business choices, which is the primary goal of the accounting profession. Indeed, authors such as (Lin & Hazelbaker, 2019),

Information systems and accounting operations have moved from paper and ledgers to digital forms through the use of computers and expert systems as technology advances. The accounting professions are experiencing their biggest change in recent times, thanks to the rise of artificial intelligence.

Similarly, (Kaya et al, 2019) report that robots and automation have eliminated nearly 40% of the work

that CPAs used to do. Indeed, intelligent robots are employed to take inventory, process bank audit confirmations, read contracts or other documents to provide relevant information, organize the audit, evaluate evidence, analyze individual accounts, and draft audits (Lin and Hazelbaker, 2019; Meskovic et al. 2018).

Accounting data automation, or digital processing, is only the initial stage of the digital revolution. Financial executives and business leaders have sought methods to improve the accuracy, thoughtfulness, and cost effectiveness of accounting tasks, whether technological or manual.

The goal of artificial intelligence is to improve two critical new factors: learning and problem solving. With this in mind, we wish to investigate the critical influence of machine learning on the accounting profession through this study; our research problem focuses on the following question: **Is AI the way of the future for the public accountant?**

Three research hypotheses were formed in this work, including:

- **Hypothesis N°1:** Machine Learning would lead to a suppression of the vocation of the public accountant;
- **Hypothesis N°2:** Machine Learning would have no impact on the accounting professional's field
- **Hypothesis N°3:** Machine Learning would change the foundations of the accounting profession.

Before we begin to address our problem, we need to do a literature review of the key ideas in our study, namely artificial intelligence and the career of a professional accountant. Next, we will investigate whether AI and the professional accountant have a causal relationship. Finally, we will examine the results of our qualitative research, which included 20 accounting firms.

Defining artificial intelligence (AI) is a simple problem. When it was first developed in the mid-20th century, it was consistently sidelined. Understanding human cognition and duplicating it to build mental functions equivalent to those used by humans is the overall goal of science rather than a specific field. Thus, AI is an amalgam of computer science, mathematics (logic, optimization, analysis and probability), natural psychology and linear algebra... without neglecting the specialized knowledge of each of these disciplines.

II. Some theoretical concepts on the notion of Artificial Intelligence

No matter how hard we try, we are unable to fully understand what artificial intelligence (AI) is. Since its inception as a single field of study, it has always been a perpetually pushed frontier. It refers to a program whose primary goal is to better understand human cognition and replicate it in artificial systems. Artificial intelligence combines computer science, mathematics (logic, optimization, analytics, probability, linear algebra), cognitive science and domain-specific expertise. Similarly, the approaches that underlie it, such as semantic analysis, representation, statistical or exploratory learning, neural networks, etc. are complex. (HUTZL V, 2021)

This type of technology was inconceivable a century ago. Machine learning is not alive, it does not exist in the real world. A name has been given to an intelligent tool for the first time in history (Steve JACOB et al, 2020). The concept of artificial intelligence technology has been defined by several authors, including Marvin Lee Minsky. Artificial intelligence is defined by its progenitors as "the construction of computer programs that participate in tasks that humans perform more efficiently because they require higher-level cognitive processes, such as pattern recognition, memory organization and critical thinking" (Benoit Georges, 2019). John McCarthy, the inventor of artificial intelligence, shares this attitude in a similar way "The goal of artificial intelligence is to create intelligent machines, primarily computer programs (AI). In other words, the goal is to replicate the unique talents of the human brain via technical means. The art of extracting knowledge and information from huge databases. In addition to displaying survey results, sales figures, and macroeconomic indicators, it is about intelligently extracting information through machine learning.

Discussing artificial intelligence requires a discussion of the concept of human intelligence, which is a difficult task given our intuitive notion of its malleability. The concept of intelligence is defined as "Intellect, feminine noun (from Latin "intelligentia", from "intelligere", I know)" in the "Larousse" dictionary. There are other arguments. Intelligence can alternatively be defined as "the set of mental processes aimed at acquiring conceptual and logical information." "adaptability and the ability to choose the best course of action according to the circumstances" (LAROUSSE dictionary).

Based on these four pillars, we can conclude that the concept of artificial intelligence is used to evaluate a massive amount of data of different types, classify them, sort them and automate activities, which is a branch of computer science.

The first step is to provide the basis for attempting to reproduce all or part of human intelligence. The "disciplines of number and command" are the second guiding principle. The analysis and organization of data are made possible by this tool. Statistics and probability, mathematics and logic are the most important subfields for the computational model of mental abilities in this growing scientific subject.

- The third pillar should be devoted to cognitive science. It is necessary to apprehend the

In the third pillar, cognitive science, we examine how our body communicates with our brain, focusing in particular on the neural network.

- Language is the last pillar. One of the most reliable signs of superior animal cognition is language. Animals with more complex language skills are considered the most intellectual, since humans are at the top of the food chain. When it comes to mental representation and interpersonal interaction, language is crucial. It is possible to create artificial intelligence by combining these four domains (Froncois CAZALs et al., 2020).

Next, we will look at how AI affects the accounting industry, particularly the CPA industry

An integrated Markov system can be represented in a few words as a standard Markov chain whose states are hidden. This means that there is a Markov process whose transition probabilities depend only on the current state of the process. However, the information obtained is not the states, but a random variable that depends on the states. During time t , the chain is in the state i - Furthermore, what is observed here is not the state i , but rather the result of a random variable that depends on the state the chain is in. When working with hidden Markov models, the challenge is precisely to estimate the parameters of the observation laws and the transition probabilities of the underlying matrix with as only observations the results of this state-dependent statistical variable. It is important to note that the observers can be of any law. We could have observations that are normally distributed, so the hidden Markovian variable could influence the mean, variance, or both values, for example. The variable under study can also be Poisson. - In this case, the underlying variable would influence the parameters. However, the observation variable may also follow no known probability law. Our observations should be random and depend only on the state of the channel.

This baum-welch algorithm is the key to the method for computing inference on hidden Markov chain networks. It consists of an EM (Expectation-Maximization) algorithm adapted to hidden Markov chain models. It is thus a recursive algorithm, whose parameters are updated at each iteration, and which tends towards the right values to be estimated, if our original values are well chosen. The forward-backward algorithm is an integral part of this algorithm. Let us first observe 2 properties.

To begin, let us briefly introduce semi-Markov processes. A more thorough introduction of this process is presented in Ross' book (Ross, 2009). We can imagine a Markov chain as described in chapter 2 with n states, for example. Under a classical Markov process, at time t , the process would be in one of the n states of the chain, S_i for example, and at time $t + 1$, a specific transition would have occurred and the process would now be in state S_j with probability $a_{i,j}$. In a semi-Markovian model, the process makes a number of random visits to each state between transitions. It thus remains in the state s_i from time t to time $t + l$, where l is a random variable. Thereafter, a transition will take place according to the probabilities contained in the matrix A , just as it would have been the case in the classical Markov model. It is important to note that the variable that qualifies this random time interval between transitions can be discrete or continuous. In our framework, we will consider that this variable is discrete. Of course, in a standard Markov process, we remain a random time to a state, time that follows a geometric law. The semi-Markov models are, therefore, a generalization of the classical Markov models allowing the use of other laws of duration than the geometric law. Given the fact that the Markovian variable takes a certain value during a time interval, it is common to consider that the return density $a_{i,i}$ is zero. Therefore, we have a transition matrix A whose main diagonal contains only zeros. In this way, after passing the time unit at a certain state, the Process will change state.

Scientific theories, such as heliocentrism, relativity, etc., and inventions, such as the airplane, television, computer, etc., are generally created from the achievements of a previous cultural development which does not exclude errors, myths, false beliefs. The IA as a collection of inventions, ideas and theories is a field of research marked by the survival of an ancient idea in our culture, sometimes associated with the world of the imagination (the myth of the IA), other times associated with a *logos*. Kepler having found nineteen hypotheses about the trajectory of Mars and calculated all these hypothetical trajectories succeeded in finding the true elliptical trajectory. We are not in a position to know how many hypotheses on the functioning of the mind or on the functioning of machines and programs in IA it will be necessary to conceive to prove or deny that artificial intelligence is feasible. Can we with our knowledge and with the development of the symbolic-logical capacities of computers make a machine think? This philosophically formulated question would be asked as follows: "what are the limits of thought to produce an explanation about itself that can be reproduced by means of formal representations? We have shown that the IA, just like ancient Greek philosophy, gradually emerges from its mythological character to find principles of rationality from the intersection of diverse knowledge. The *logos* of the IA is explained by an assembly of theories and techniques in the field of computer science, neurology, linguistics, cognitive psychology, logic and philosophy. This *logos* is able to support it as a discourse on the concrete possibilities of creating intelligent artificial beings (or if you want programs). When a criticism of the IA touches any aspect of these theoretical elements that constitute it, situated somewhere at the intersection of computer science, brain studies and the human sciences, it is the *logos* of the IA that is in evidence. In the same way that the Milesians, Thales, Anaximander and Anaximenes elaborate all sorts of explanations building a new image of the universe that puts aside any recourse to myth, those who work in IA handle the *logos* (discourse) on intelligent machines in order to eliminate any mythological rhetoric that contributes to a bad

1. Use of artificial intelligence: accountants as an example

A number of laws and regulations have been put in place to modernize this profession. When accountants enter data into a computer system, the system produces additional data and instructions (establishing accounting statements on the financial situation of a company, establishing daily news of accounting transactions (such as receipts), processing the payment of salaries, preparing summary statements of financial statements and tax and social security returns). In addition, a series of financial and management reports are generated from the information collected. They are then used to improve future business and product decisions by classifying or reviewing the information they contain. In some cases, this may mean that the patterns in this data set can be replicated using other data or modified to reflect a change in the market. On the other hand, predictive and anticipatory accounting is possible with AI... AI, for example, may be able to predict the possibility of a customer not paying and take preventive action. Accounting output is already being done by bots through several technologies that are really gaining traction in the ecosystem. For example, flow retrieval, automated merge of purchases and sales, and cash flow tracking.

To automatically scan all paper invoices, we need optical character recognition (OCR). There are several applications for character recognition technology, which is essentially an intelligent scanner that recognizes the text in scanned documents. If a customer number, quantity or words can be identified, the accounting system can include this information immediately.

A robot that connects to platforms and retrieves data is known as RPA (Robotic Process Automation). Artificial intelligence (AI) is sometimes used in conjunction with this technology. According to the definition of RPA, it is a system that simultaneously collects, processes, and analyzes transactional data from a wide range of computing applications (Steve J et al, 2020). Robotic analysis automation (RPA) is capable of processing, interpreting, and converting computer applications and/or data, and then rendering it into accounting software. With RPA, repetitive and time-consuming processes can be statically automated. The main objective is to help companies increase the speed and profitability of their operations. The following areas of accounting may benefit from this modern technology: post-closing activities, cash management, litigation management, vendor management, electronic document management.

The efficiency and reliability of an accountant can be increased by automating repetitive data entry and accounting to the maximum extent possible. Deploying RPA thus brings out the essential features of compliance, time savings and improved quality and accuracy of work while ensuring excellent governance and reducing the amount of errors.

- Artificial intelligence (AI) is used in machine learning, which is a subset of AI (Hutzli V. 2021). It is used to make strategic choices based on a model of reality. It is a process that compares invoices to payments and sends notifications when payments are late or the credit limit is reached. Overpayments can also be detected by AI, resulting in additional funds. Because of its ability to predict when the company will run out of money...

There are many ways for machine learning to develop an algorithm that can create its own internal representation. This is why the term "learning" was coined to describe this process. Although artificial intelligence (AI) is not a new concept, the learning capability of this field has increased dramatically in recent years. Recently developed technologies have shown great adaptability in the tools they use.

- Deep learning, also known as deep learning, is a type of artificial intelligence that allows the computer to learn on its own, as opposed to programming, and was first developed in the 2010s. With the ability of Deep learning to identify patterns in large data sets and provide tailored suggestions, text translation and fraud detection are all possible outcomes.

Consistent, high-quality data is essential to delivering the financial services we anticipate from flexible AI. The quality of invoice identification and accounting assignments represents the learning set for machine learning. Weak AI currently used in the numbers industry is AI that relies on human intervention to solve problems, even though it knows full well that its capabilities far exceed those of humans. In contrast, a strong AI should be able to react autonomously and intelligently with a level of awareness close to that of humans. An idea that has not yet been realized.

Since its inception in the early 2000s, the term "deep learning" has been used to describe a branch of artificial intelligence (AI) in which computers can learn without human intervention. With deep learning's ability to identify patterns in large data sets and provide tailored suggestions, text translation and fraud detection are all possible outcomes.

It is critical that we have consistent, high-quality data in order to deliver the financial services we anticipate from flexible AI. The quality of invoice identification and accounting assignments represents the learning set for machine learning. Weak AI currently used in the numbers industry is that which relies on human intervention to solve problems, despite knowing full well that its capabilities far exceed those of humans. In contrast, a strong AI should be able to react autonomously and intelligently thanks to a level of awareness close to that of humans. An idea that has not yet been realized.

III. Méthodologie de recherche

1. *Qualitative study*

An in-depth qualitative investigation on the influence of artificial intelligence (AI) on the profession of public accountancy in Morocco was undertaken to find an answer to our problem.

For this project, we conducted extensive online and book research to obtain as many publications as possible dealing with the topic of new features and tools for accountants. We realized that a number of possible futures for this field had been developed. Our research also included talking to people in the financial industry to get a sense of how they were responding to AI. It has been fascinating to see if our interviewees have a clear idea of what AI is and how it fits into their workflows, and if they intend to use it. Semi-structured interviews are used in our study as part of a qualitative methodology. The questions in our interview guide were asked of 20 different Moroccan accounting firms in various cities. For our interviews with accountants, auditors, CFOs, and fiduciary CFOs, we set up appointments in advance with the people we wanted to talk to. The interviews lasted an average of 40 minutes, with the interviewer recording and taking notes, as well as transcribing the responses. As a result, the final number of interviews was based on Glaser and Straus's (1967) notion of information saturation, i.e., when respondents were no longer providing new information in relation to that previously obtained. A two-month period between July and August 2021 was used to conduct the research for this project. We used content analysis to review the data and determine what was important.

The goal of this research is to learn what accounting professionals think about the integration of AI into their business and how it will impact their business. To do this, we will survey the opinions of accounting professionals in the field.

Functionalism holds that the understanding of how this mind works will be gained when we design a program that is functionally equivalent to it. If we can, by the formal means at our disposal, design programs or machines capable of performing the same processes as those produced by the human mind, then it is theoretically possible to design systems capable of having mental states similar to those of human beings. Both functionalism and representation theory are linked to the most important theses of AI. The functionalist philosophical current is a continuation of the representationalist metaphysical project of analyzing the mind from universal computational principles. It is also the theory of mind closest to the research in AI. The discussions in our second chapter allow us to conclude that the theses of AI are based on representationalist conceptions (as a way to explain thought and intelligent behavior), and on a mechanistic conception of thought (functionalism).

These two elements constitute the philosophical foundations of the AI logos and allow us to assert that AI and philosophy are linked. In Chapters ID and IV, we presented two distinct and critical approaches to AI defended by Dreyfus and Searle. We looked at their philosophical views on AI by discussing their most important works on the subject. Our goal has been to show that AI is a research area susceptible to philosophical critique and that it simultaneously reiterates our explanation of AI as logos³⁵⁷ and confirms the relationship between AI and philosophy.

Both Dreyfus and Searle have raised philosophical objections to AI in order to highlight the theoretical limits of the field. They have shown, through arguments sometimes very close to each other, that given the theoretical means employed by those working on AI, it cannot be said that a computer behaves intelligently (Dreyfus) or that it understands natural language (Searle).

Dreyfus analyzes the results and presuppositions of artificial intelligence using a phenomenologically inspired epistemological approach, while Searle, on the other hand, analyzes the semantic limitations of what is referred to as intelligent systems using an analytic approach. Dreyfus' and Searle's criticisms have three points in common: (1) the analysis of the question of rules in relation to intelligent behavior, (2) the emphasis on the body (or brain) in the analysis of the human mind and intelligent behavior, and (3) the analysis of the notion of processing this information. For Dreyfus as well as for Searle, the description of intelligent behavior by means of rules does not mean that rules are involved in the execution of that behavior. For example, we use language without appealing to rules.

When these rules are internalized, we no longer need them. Rules serve to describe our linguistic competence, but they are not sufficient to guide or explain our linguistic behavior (performance). The two philosophers tackle the notion of information processing used in AI and show that when we act intelligently, we are not processing information in the strict formal sense of the term. For Searle, this notion of Communication theory has been unduly semantized, while for Dreyfus, it does not correspond to what we do when we act intelligently.

2. *Analysis of responses*

AI, according to anecdotal evidence, is expected to have a significant impact on accounting services in the next five years, bringing new ways of conducting business, research and accumulating statistics for consulting firms. They have a lot of data, but they don't have the know-how to do anything with it. AI will open

up new opportunities for data exploitation. It allows for rapid data analysis and long-term monitoring and compliance audits. As e-invoicing and AI-based solutions become commonplace, financial production will be significantly accelerated.

It is simpler for some organizations to manage field staff if they adopt technology. In the previous two years, the accountant has undergone significant change, particularly as a result of the covid-19 healthcare crisis. This change has been supported by a large number of consultants and accounting firms. Their job is to digitize electronic invoices, bank statements, client data, payroll administration, etc. so that we can keep an eye on our financial activity. Easier to use and more cost effective means of communication. Digitization is just the beginning of artificial intelligence, which will enable data collection, transfer and restoration, as well as the ability to automatically make judgments and follow accounting advice, with the ultimate goal of improving work tools and processes.

Anticipated future developments in AI and digitization suggest that operational accountants may soon be replaced by AI and digital systems, with little to no human involvement.

Accountants and auditors will be able to use these new technologies and digital tools to link financial and non-financial data to accounting information, helping them make better judgments and enabling companies to be more flexible and adaptable in the future.

3. *Artificial intelligence: integration contributions*

A majority of those surveyed said that AI integration is having a positive effect. Their position is that the use of artificial intelligence (AI) is the only way to stay innovative and competitive in today's rapidly changing environment. But a holistic view is essential. It is essential, productivity experts say, to rethink the work that will be disrupted by AI, since machines, rather than humans, will be doing it, saving energy and resources, since the work will be done seven days a week, 24 hours a day, 365 days a year. On the other hand, there is virtually no risk of making a mistake by using robotics. Automated follow-up reports can be sent to the relevant parties.

With machine learning, an accountant will be able to access the hundreds of thousands of records she has on her clients and prospective clients, freeing her employees from having to spend time building and analyzing databases.

Their overall assessment of the effect of digitization and their assumption that AI would only be used to automate tasks such as real-time posting data, revenue projection, and even evaluating documents such as contracts and emails in a short amount of time, however, is consistent. In most cases, AI should only be used by people with a working knowledge of the subject.

4. *AI: training and learning*

Everyone who responded to our survey about how their workplace could benefit from artificial intelligence (AI) training indicated a strong desire for such training. The need for programming capabilities among accountants is expected to increase as a result. Therefore, companies and networks need to be made aware of the cipher profession as early as possible as part of digital technology development education. They need to be aware of the need for a different kind of training for accounting professionals, one that goes beyond the fundamentals of technical accounting and taxes, so they can take advantage of new career options such as working with AI systems and providing high-quality data. Virtual education and training will be able to be a useful tool in the early phases of integrating AI technology into human work. The execution of digital transformation will make the use of AI technology easier.

Interviewees indicated that as the accounting market becomes more competitive and regulators tighten their grip on the dangers of the profession, large firms are investing a lot of money to stay current and knowledgeable.

5. *The reluctance of Artificial Intelligence*

The use of AI is a concern for 60% of the population. They are afraid of new technology because they don't know what it can accomplish and don't know what it can do for them. The abuse of artificial intelligence is therefore a serious threat to humanity. In general, experts believe that everyone should be concerned about the possible consequences of AI.

6. *The impact of Artificial Intelligence on accounting firms*

What we found out in interviews with the person involved: "Due to Covid-19's health problems, the accountant's interactions with clients were dematerialized as a matter of course. The government has already mandated electronic invoicing, but the private sector needs to do the same. As an example, OCR ("OCR" in English) makes it possible for the first time in history to automatically extract the data needed for the accounting process from digital files such as purchase orders and invoices transformed into digital files.

According to the interviewees, health and economic problems have made accountants even more critical in the present day. During these difficult times, they have stepped in as advisors to help business owners. They manage the company's working capital, reconcile invoices with cash receipts, help clients with their problems, and advise the CEO on topics such as management, tax, and employee rights, among others. Keeping the books in order.

Despite this new invention, the accounting profession will not be wiped out as accountants will be able to focus on more valuable tasks such as auditing and tax preparation. Although small businesses and fiduciaries may be affected, the accounting assistant position is expected to be eliminated as a result of this change. Due to the lack of clarity and specificity of the term "unemployment" by the experts, there will be real issues such as the elimination of the Busnis Analyst, Artificial Intelligence Project Manager and Process Minimization Analyst positions. They will be able to play an advisory role as they will be able to present themselves as a true coach to their clients.- Accounting firms will need to rely on the following capabilities in the future: To help them in their work, machine learning can be used. Preventive measures can be taken in the event that a customer's payment history shows a tendency towards late payments. By focusing on listening and empathy, coaches will be able to create a more meaningful relationship with their clients.

Accountants who want to be successful must prioritize developing the interpersonal and problem-solving skills of their staff, rather than honing their technical skills. Companies often look to their CPAs for help in areas where they lack specific expertise, such as management, lawsuits, and legal issues. A robot can't yet fill the role of a "professional." "To ensure that a computer can't make decisions that a human can't, team training is essential. The field of artificial intelligence, meanwhile, will provide new opportunities for accountants (AI).

Accountants, auditors, and auditors need to verify that the accounting is reliable and accurate before certifying the company's accounts. To reduce or even eliminate human errors, AI must be able to quickly discover relevant invoices for each entry.

About 10% of companies said they would continue to operate even if their equipment failed, rather than waiting for it to be fixed...

Because they are already in the flow, 80% of respondents said they are concerned about the deployment of artificial intelligence. Despite this, AI offers a number of positive aspects. Focusing on data quality and using technology to produce correct accounting data is crucial in finance. Therefore, we need to be very careful when automating to ensure that the AI does not just repeat and transmit what we have asked it to do. Indeed, due to poor scanning quality, a stamp or paperclip can hide important information on an invoice, which could have a negative impact on their work and their team. They should not give artificial intelligence (AI) too much freedom without checking the results first.

A computer cannot be held responsible for its own activities, as it can only execute the commands it is given. New technologies do not replace real people, but rather are a method of making our lives easier and more efficient. We are unable to replace the ability of the human brain to always invent new ways to solve problems. Rather than replacing the human intellect, artificial intelligence should complement and enhance it.

IV. IV Discussion Of The Results

Repetitive financial and accounting tasks, as well as basic difficulties, can be solved with the help of artificial intelligence (AI), which has a favorable influence on the efficiency and competitiveness of accounting activities.

According to the quantitative survey, companies are open to any reform that improves their bottom line. Self-learning technologies will soon be commonplace in our daily lives. In addition, organizations that cannot afford to invest in AI may miss out on cutting-edge technical advances, making the situation even more challenging. In addition, many specialized tasks, such as negotiation and social foresight, team building, and persuasion, as well as new professions and skills, remain unavailable to AI. Because ultimately, we're all in this together.

Three of the key changes AI will face in the future are connecting with consumers, improving processes, and providing new services that fit the new business model. -

Ten percent of these organizations are concerned that AI's ability to simplify their daily activities will negatively impact the recruitment of new workers and interns, potentially increasing the number of people out of work. Because it is conceivable that artificial intelligence will lead to an excessive dependence of humans on computers. As a result, they will lose interest and become complacent.

However, the people in charge of programming and guiding the machine can keep this notion by rising from the level of basic employees or accounting assistants. Human inventiveness and learning ability, on the other hand, will not be replaced by AI. Instead of restructuring or changing accounting firms, the focus would be on shifting "soft skills" workers to higher value-added tasks. Artificial intelligence will certainly challenge the work of finance managers (AI). Accounting assignments are the most significant part of the process.

Soft skills and data analysis will be needed for the accountants of the future to understand how the

algorithms work. They must be able to problem solve, understand business, and adapt to constant change if they are to succeed in this position.

The use of artificial intelligence (AI) in tax administration is expected to have a significant impact on tax processes and tax discipline in the future.

Companies will need to help their accounting teams adapt to these new technologies and train employees to use them effectively. It is possible to play a key role in strategic decision making within more sophisticated organizations to be adept at advanced statistical and data mining approaches.

Given that artificial intelligence requires a new set of professional profiles and that the accounting function is composed of a series of tasks that are difficult to automate in a meaningful way, it is unlikely that the number of unemployed accountants will increase.

In light of this trend, professionals will be able to devote more of their time and effort to high value-added jobs. The use of advanced technology and the avoidance of certain tedious tasks could win over digital natives.

While artificial intelligence technology is still in its infancy, we believe it will eventually eliminate some jobs and create new ones as it develops. Artificial intelligence alone will never strengthen the accounting system; people will always be at the heart of it all. Fundamentally, it's just an improved version of a tool that has been enhanced by new technology.

1. Syntheses

Based on the information we've gathered from the research, articles, and books we've read, and the responses we've gotten from our interviews, accounting is likely to be one of the professions most affected by AI. CPAs all agree that AI should be a part of their firms' operations. For them, this digital revolution offers several benefits, including time savings and governance improvements, as well as a reduction or elimination of errors. The biggest fear is that this new technology will lead to an increase in the number of unemployed. But,

To get out of this, employees will need to shift to other AI-related activities, respond quickly to train employees to use the technology, and learn new social skills. Employees will be at much greater risk of losing their jobs if this change is not made in a timely manner.

Accounting will undergo major transformations over the next few years, but the need for accountants will persist, as several studies and reactions show. In other circumstances, they may even gain more value and become more involved in the decision-making mechanism, as managers will rely on their experiences to study and interpret the data provided by AI. Experts in their field will also be required to develop, manage, and correct the AI to perform its tasks appropriately.

Accountants will benefit from the rise of AI in several ways:

- The disappearance of some jobs, specifically some tasks;
- The creation of new jobs and tasks that are based on computer science principles;
- The importance of social, communication and listening skills in the profession;
- The reduction of errors that creep into repetitive tasks.

As we discovered during this interview, the mechanisms in place are not yet synchronized enough to allow different accounting firms to adopt artificial intelligence in the best possible way, this study is also time-limited in this regard. As a result, some accounting firms may find it difficult to integrate this digital revolution as it requires a significant financial commitment.

V. Conclusion

Today, technology is gaining importance while evolving at a very fast pace. There is no doubt that artificial intelligence is having a significant impact on the financial sector, but it is just another tool to help with various responsibilities, as repetitive work will be handled more efficiently, with almost no anomalies, thanks to artificial intelligence. An opportunity for accounting firms to improve their human resources. Computers and robots can be used to improve human intelligence.

He believes that the human brain and behavior are more complicated than they appear. Artificial intelligence (AI) research that relies on mechanical theories of cognition such as functionalism is, in his view, doomed. A humanoid body could theoretically be used to create artificial beings with human-like intelligence, according to this author's thesis. As a result, Dreyfus argues that the factual properties of the mind or brain culture cannot account for intelligent behavior. Intelligence can only be explained by understanding the world and human wills. Human situations and actions will always be fraught with ambiguity. Humans can easily understand the underlying principles of human relationships. This pragmatic practice defies explanation by rules alone and functionalism. He believes that for a computer to function in real-world situations, it must be able to learn, which means it must be able to live and function like humans. Dreyfus believes that, unlike machines, human behavior does not depend on the functionality of any program. Dreyfus' philosophical view is that artificial intelligence can be shown to be false, and that his approach to artificial intelligence research is

therefore crucial. In his view, artificial intelligence would achieve the goal of classical metaphysics, which is to use formal approaches to explain the cosmos and the human mind in their entirety. The critique of the biological, psychological, epistemological, and ontological presuppositions that guide AI and cognitive science research is epistemological in nature, since researchers tend to overstate their work and fail to understand its theoretical constraints. The goals of Dreyfus' research are to reveal the mysteries of technical efforts in these fields, and to recognize the technological and theoretical limitations of AI projects. Intelligent activities or the mind, according to Dreyfus, cannot be reduced to discrete data that can be processed digitally. What he sees as the essence of intelligence or smartness is a world built by and for people. At least, we are not in a position to fully explain human experience by formal representations. Accordingly, Dreyfus calls it an anti-representationalist and anti-formalist philosophy.³⁵⁸ - Dreyfus's anti-representationalist critique has a problem, however: we conclude that Dreyfus's anti-representationalism leaves no room for the development of AI since it is tied to programming methods that require representations. Representational models are, in our view, essential for artificial intelligence. It is possible to do research on cognition without the use of representations, but this is not true for all cognitive researchers. Dreyfus shows both the link between AI and philosophy and the properly philosophical interest that such a theme can have despite its clearly anti-representationalist character by using the representationalist philosophical tradition for artificial intelligence. Dreyfus shows both the link between AI and philosophy and the properly philosophical interest that such a theme can have despite its clearly anti-representationalist character by using the representationalist philosophical tradition to understand intelligent behavior in AI.

A bit reductive, but vital because of their speed. Artificial intelligence (AI) has the potential to transform the way CPAs do their jobs. So it's critical for these professionals to pay close attention and think about how these technologies will be leveraged. An AI system has a limited set of capabilities and cannot understand or make choices. Companies need to find a solution that enhances their capabilities and provides the expected benefits in order to continue to thrive. If something goes wrong, someone will have to accept responsibility. Every time new data and analytics are made available, someone has to know how to analyze it. A recurring situation.

To meet the requirements of both areas, accountants need to standardization and refinement of procedures are critical to achieving accurate and repeatable results. The second category is likely to continue to grow in importance when it comes to partnerships, contracts and business relationships.

Another assumption we have made is that "artificial intelligence" will disrupt the foundations on which the accounting career is built. However, new accounting profiles and higher value-added jobs will emerge, requiring knowledge of computer science, programming, and other computer-related disciplines. Accounting firms need to rethink their organizational structure to take advantage of new techniques that have the potential to change the industry.

As a summary, it can be said that regardless of the type of industry or business model, all firms will need to undergo an AI digital transformation in order to remain relevant and creative. To minimize greenhouse gas emissions, these innovative technologies will optimize energy consumption and recycle waste. We need an answer to the question "What is the impact of artificial intelligence on the environment?", and AI may be able to provide one.

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