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PROSPECTS FOR USING ARTIFICIAL INTELLIGENCE IN THE WORK OF AN ACCOUNTANT

ПЕРСПЕКТИВИ ВИКОРИСТАННЯ ШТУЧНОГО ІНТЕЛЕКТУ В РОБОТІ БУХГАЛТЕРА

Natalia M. Selivanova, PhD in Economics, Associate Professor
Odesa Polytechnic National University, Odesa, Ukraine
ORCID: 0000-0002-4157-4946
Email: n.m.selivanova@op.edu.ua

Diana V. Bondaruk
Odesa Polytechnic National University, Odesa, Ukraine
ORCID: 0009-0001-7833-4815
Email: 10253158@stud.op.edu.ua

Vira O. Cherniha
Odesa Polytechnic National University, Odesa, Ukraine
ORCID: 0009-0006-6369-8751
Email: 10327276@stud.op.edu.ua

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Селіванова Н.М., Бондарук Д.В., Чернега В.О. Перспективи використання штучного інтелекту в роботі бухгалтера. Науково-методична стаття.

У статті досліджено потенціал застосування технологій штучного інтелекту (ШІ) у сфері бухгалтерського обліку. Розкрито можливості автоматизації рутинних процесів, зокрема обробки документації, складання фінансової звітності, податкового обліку та виявлення помилок. Зосереджено увагу на перевагах використання ШІ, таких як підвищення точності облікових операцій, зниження навантаження на персонал, оперативне прийняття рішень і стратегічний аналіз. Проаналізовано ризики, пов'язані з впровадженням ШІ, серед яких – потреба у значних інвестиціях, кадровий дефіцит, загрози інформаційній безпеці та людський фактор. Успішне впровадження ШІ вимагає комплексного підходу, який включає технічну, організаційну та етичну готовність підприємства. Стаття містить практичні рекомендації щодо вибору та впровадження інструментів ШІ, підвищення ефективності бухгалтерських процесів і трансформації ролі бухгалтера в умовах цифрової економіки.

Ключові слова: штучний інтелект, бухгалтерський облік, автоматизація, діджиталізація, звітність, оподаткування, оптимізація облікового процесу

Selivanova N.M., Bondaruk D.V., Cherniha V.O. Prospects for Using Artificial Intelligence in the Work of an Accountant. Scientific and methodical article.

This article investigates the potential of artificial intelligence (AI) technologies in the domain of accounting. Particular attention is given to the automation of routine processes such as document processing, financial reporting, tax accounting, and error detection. The study emphasizes the advantages of AI integration, including enhanced accuracy of accounting operations, reduced workload for professionals, expedited decision-making, and improved strategic analysis. In addition, the paper addresses key implementation challenges, such as substantial financial investment, a shortage of skilled professionals, information security concerns, and human-related factors. The effective adoption of AI in accounting requires a holistic approach, encompassing technical preparedness, organizational alignment, and adherence to ethical standards. The article provides practical recommendations for the selection and deployment of AI tools aimed at improving the efficiency of accounting processes and redefining the role of the accountant in the context of the digital economy.

Keywords: artificial intelligence, accounting, automation, digitalization, reporting, taxation, optimization of the accounting process

In today's rapidly evolving world, technology is transforming all areas of our lives and professional activities, rewriting the established rules and opening up new horizons. Accounting is no exception, as for centuries it has been associated with meticulous record-keeping, painstaking work with huge amounts of data and high responsibility for the accuracy of financial information. However, with the emergence and rapid development of artificial intelligence, accounting is undergoing a real revolution. This innovative technology not only simplifies routine operations, freeing up precious time for professionals, but also opens up unprecedented opportunities for in-depth analysis, strategic planning and informed management decisions. Artificial intelligence in accounting is no longer a futuristic concept and is turning into an effective tool that can take over a significant part of repetitive tasks. This includes automating the processing of primary documentation, which is often the most labour-intensive, quickly preparing complex reports, accurately calculating taxes in line with all changes in legislation, and effectively monitoring compliance with financial discipline. Artificial intelligence significantly improves the accuracy and speed of data processing, which is critical to minimising human errors that can have catastrophic consequences for the financial stability of any business.

Analysis of recent researches and publications

The issue of using artificial intelligence in the work of an accountant is very diverse and is actively considered by many scholars. In particular, the issues of applying artificial intelligence in accounting have been studied by such domestic authors as K. Gnedina, P. Nagorny, L. Kozachenko, O. Predchuk, N. Lagodienko, A. Sarkova, and O. Prosolov. In addition, the founders of the artificial intelligence industry – John McCarthy, Marvin Minsky, Allen Newell, and Herbert Simon – made a significant contribution to the study of the general aspects of the development and implementation of artificial intelligence. Modern foreign scientists, such as T. Davenport, S. Coles, and R. Costa, are studying the impact of artificial intelligence on the financial sector and audit, analysing automation, forecasting, and process optimisation. However, a comprehensive study of the possibilities of artificial intelligence in accounting to automate routine tasks, improve accuracy and provide practical recommendations for its effective use in Ukrainian realities is an insufficiently researched issue.

The aim of the article is at studying the possibilities of artificial intelligence in accounting, as well as providing substantiated conclusions and practical recommendations for its effective use in accounting activities.

The main part

Accounting is the foundation of any successful business, its nerve centre, ensuring an accurate reflection of the financial position and efficiency of operations. It is not just a record of past transactions, but a vital system that provides key information for making strategic decisions, controlling financial flows and ensuring compliance with legal requirements. Traditionally, however, the work of an accountant has been associated with painstaking processing of large amounts of data, routine tasks such as entering information from source documents, reconciling accounts, preparing standard financial reports and monitoring numerous transactions on a daily basis. Added to this is the constant need to keep abreast of dynamic changes in tax and financial legislation, which requires a significant time commitment and attention to detail. These tasks, while critical to maintaining financial discipline and transparency, often consume the lion's share of skilled professionals' time and effort, diverting them from more complex analytical functions and strategic planning that could bring much greater value to the company.

In this context, artificial intelligence (AI) is not only a current technological trend, but also an effective, revolutionary tool that can significantly change accounting activities. AI promises to free professionals from monotonous, repetitive operations by automating them with unprecedented accuracy and speed. This provides accountants with unique opportunities for in-depth strategic analysis, forecasting financial performance and making more informed management decisions. The introduction of AI paves the way for greater overall efficiency, greater accuracy and faster processing of accounting processes, allowing accountants to focus on interpreting complex data sets, uncovering hidden trends, identifying potential risks and providing valuable, proactive business management recommendations. This transformation promises not only to streamline workflows, significantly reduce costs and minimise human error, but also to fundamentally increase the overall value of the accounting function to the enterprise, transforming it from a cost centre to a strategic asset.

Artificial intelligence is an organised set of information technologies that can be used to perform complex tasks by using a system of scientific research methods and algorithms for processing information received or independently created during work, as well as to create and use own knowledge bases, decision-making models, algorithms for working with information and determine ways to achieve the tasks. New technologies are changing the traditional ways of working that have existed for many years in all industries. These changes are also affecting the expectations of customers towards companies. This is also true for the accounting industry. The use of artificial intelligence can significantly increase the productivity and efficiency of accountants. The percentage of time reduction in tasks can be as high as 80-90%, which gives professionals the opportunity to pay more attention to advising their clients. The use of artificial intelligence in accounting operations also contributes to the quality of work, as errors become rare. When accounting firms integrate AI into their operations, they become more attractive as employers and service providers to the next generation of Generation Z. This group of people grew up in a rapidly evolving technological environment, and they expect potential employers to value and implement advanced technological solutions and innovations, making their businesses attractive to this young audience.

Artificial intelligence technology is useful for many industries, but it is important to ensure its safety and controlled development. Ukraine has joined the Bletchley Declaration, which envisages cooperation between 29 governments in the field of artificial intelligence security. This cooperation is aimed at developing and implementing risk-based policies for regulating artificial intelligence that would reduce possible negative consequences of using this technology. According to the research of domestic scholars, such as K. Gnedina, P. Nagorny, L. Kozachenko, O. Predchuk, N. Lagodienko, A. Sarkova and O. Prosolov, the use of artificial intelligence in accounting activities has both positive and controversial aspects that should be carefully considered when introducing these technologies into professional practice.

According to an analytical report by Mordor Intelligence, the global market for artificial intelligence in accounting is estimated at USD 1.56 billion in 2024, with a projected growth to USD 6.62 billion by 2029. When analysing global trends in the development of artificial intelligence in accounting, it is advisable to highlight the North American region. The projected revenues from the US artificial intelligence market (in USD billion) for the period 2015-2025 by segments are shown in Fig. This indicates an active expansion of the use of AI in the accounting sector and a growing interest in it among the professional community.

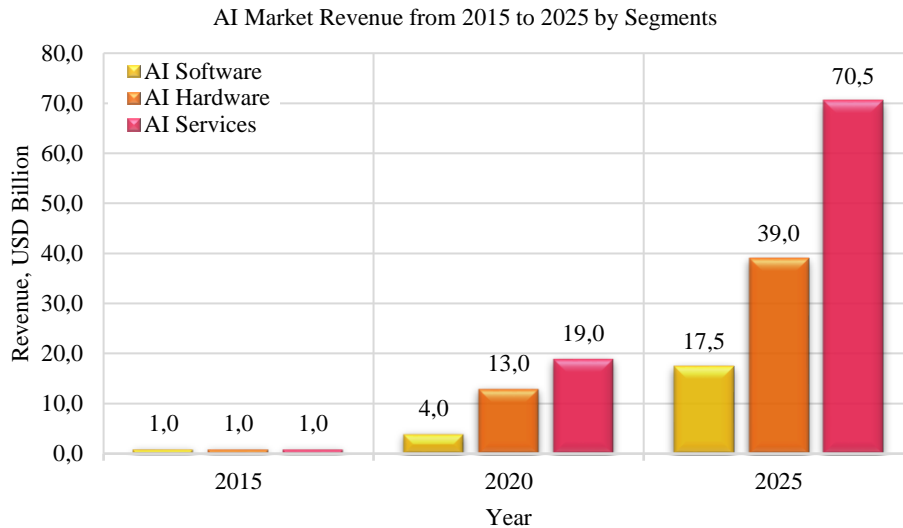


Figure 1. Revenue from the artificial intelligence market from 2015 to 2025 by segments, in billion USD SOURCE.

Source: compiled by authors on materials [4]

Artificial intelligence is transforming from an auxiliary tool to an integral part of the modern accounting system. It requires not only technical training, but also a new culture of responsible use of digital tools, where qualities such as flexibility of thinking, ethical awareness, readiness for change and continuous learning come to the fore. These are the accountants who will form the basis of the future digital economy.

Table 1. Artificial intelligence tools and their application in accounting

The name of artificial intelligence	Functionality	What actions can be taken for the purpose of accounting
ChatGPT	Automate the creation of accounting reports	Processes financial data and generates reports based on predefined templates or specifications, allowing you to generate accounting documents such as balance sheets, profit and loss statements, tax returns, etc.
	Accounting and tax advice	Providing advice on accounting and tax matters, explaining legislative changes and their impact on the business, as well as recommendations on optimal tax strategies and compliance.
	Analysing financial data	Analyse transactions, accounts, expenses and income to identify anomalies, errors or irregularities in accounting, as well as unusual financial partners and risks that may require additional attention.
	Optimisation of internal processes	Automation of routine tasks such as drafting template documents, answering frequently asked questions, and integration with other accounting systems to automatically receive and process up-to-date data.
	Automation of communications with contractors and customers	Automate responses to inquiries from customers, suppliers or partners, provide basic information on account status, transaction history or contract terms, reducing staff workload.
Rossum, Infrd	Invoice processing and data entry	Extract data from invoices and receipts. Identification and classification of important information (invoice numbers, dates, amounts). Entering data into the company's accounting system.
Expensify, Fyle	Cost management	Automatic scanning and classification of receipts. Mileage tracking. Ensure compliance with company policy. Identification of excessive expenses and determination of expense rates.
MindBridge	Analysis of financial statements	Analysis of financial statements. Identify hidden patterns and trends. Identify unusual transactions or discrepancies.
YayPay, HighRadius, Beanworks	Inventory of debts	Automation of settlements with counterparties. Control of receivables and payables. Classification of overdue debts.
Blue J Legal	Compliance with tax legislation	Navigating complex tax regulations. Ensuring compliance with regulations. Minimising tax liabilities. Forecasting tax results. Searching for savings opportunities. Analysing the impact of different tax strategies.
Sift Science	Fraud detection and risk management	Analyse large amounts of data to identify unusual patterns or anomalies. Protection against fraud. Reducing payment chargebacks. Ensure AML and KYC compliance.

Source: compiled by authors on materials [5-15]

The use of AI tools in accounting opens up new opportunities for automating key processes, such as automatic data analysis and forecasting, accounting setup, combining AI with accountants' expert knowledge, identifying risks in audits, sharing and providing real-time financial information, and controlling payments. The list of AI tools used in accounting is shown in Table 1.

The table presents various artificial intelligence systems that can greatly facilitate accounting and optimise financial processes in businesses. These tools automate key functions, such as generating accounting reports, processing invoices, managing expenses, analysing financial statements, and inventorying debts. The ability to automatically extract data from documents, analyse financial information and generate reports reduces the workload of accountants and increases the accuracy of accounting.

These systems also ensure tax compliance, fraud detection and risk management, which minimises tax liabilities and increases the efficiency of financial management. Integration with other systems automates internal processes, improves communication and increases control transparency.

These technologies save time, resources, ensure accuracy, efficiency and compliance with regulatory requirements. Determining the AI needs of an enterprise will allow them to be effectively integrated, increasing the competitiveness and sustainability of the business.

Among the many artificial intelligence tools currently used by accountants, special attention should be paid to the paid version of ChatGPT – ChatGPT Plus. It is distinguished not only by its advanced functionality, but also by a high level of accuracy, reliability and adaptability in performing professional tasks. Thanks to access to the powerful GPT-4 model, this version demonstrates a deeper understanding of accounting and financial processes, allowing you to work with large amounts of financial data, analyse tables, formulate official documents, reports and cover letters, and explain complex tax regulations in a clear way. It can also assist in the preparation of declarations, contracts, acts and maintain a high level of accuracy when automating routine operations. ChatGPT Plus is easy to integrate into workflows, supports modern file formats, and provides fast and relevant answers to queries of any complexity. Compared to the free version, the paid model is much better at handling multi-level tasks, effectively uses professional terminology, and ensures minimal risk of errors, which is especially important in financial activities. That's why ChatGPT Plus is increasingly becoming an indispensable assistant for modern accountants, helping to increase productivity, reduce stress, and improve the quality of work performed.

Deciding on the introduction of artificial intelligence in accounting and analytical processes requires management to determine both the existence of such a need and its scope. An indicator of decision-making should be an increase in the efficiency of accounting work after the introduction of this innovation. The mechanisms for making such a decision are structured in Fig. 2 [5].

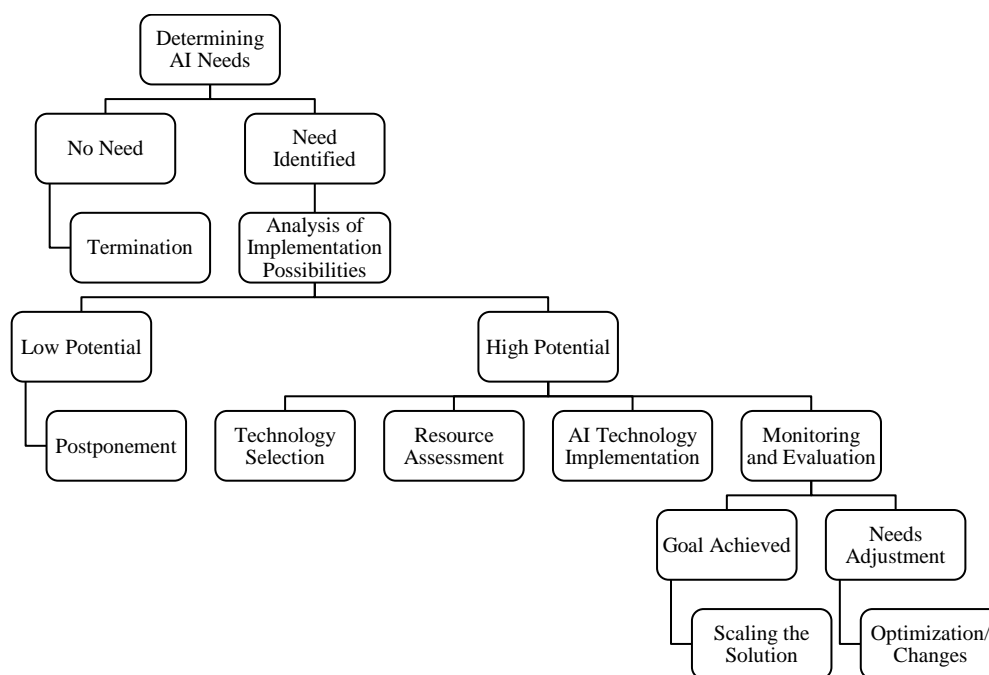


Figure 2. Identification of the enterprise's needs for the use of artificial intelligence

Source: compiled by authors on materials [5]

The figure below shows the key steps in the process of identifying the need for artificial intelligence (AI) in a business. The process begins with an initial assessment of whether AI is needed to solve existing problems or exploit potential opportunities. Based on the results of this analysis, the company may conclude that there is no need at this stage. If the need is identified, the next steps include selecting the most appropriate AI technologies, their direct implementation in business processes, and further monitoring and evaluation of the effectiveness of the implemented solutions. Thus, the figure clearly demonstrates the structured approach of an enterprise to

making an informed decision on the use of artificial intelligence, starting with the identification of the need and ending with the control over the results of its application.

Artificial intelligence (AI) is a scientific field that has been actively developing since the mid-20th century, and its goal is to create automated intelligent systems. In recent years, research in this area has led to the development of various conceptual models, methods and approaches. It is important to note that many developments in the field of AI have already found practical application and have been integrated into various aspects of our daily lives [16]. One of the main prospects for the development of AI is its ability to intensify production, create intelligent assistants for humans, and contribute to progress in important industries such as medicine and construction. This involves the creation of machines capable of performing tasks that are traditionally considered intelligent, such as pattern recognition, situation analysis, logical thinking, understanding new information, learning and planning targeted actions. The development of intelligent systems implies that they will be able not only to execute specified algorithms, but also to build algorithms to solve problems on their own, even if these problems are not clearly formulated. The ability to learn and self-learn is one of the key characteristics of such systems, which allows them to constantly improve their capabilities. One of the most important areas of AI research is the creation of prototypes that mimic the human brain. This involves the development of nanotechnologies that will allow machines to process information in parallel and make decisions in unfamiliar situations based on their experience. The question of the limits of AI capabilities and whether it can reach the level of human intelligence remains open. The Turing test is one of the well-known methods for assessing machine intelligence, but there are different views on its relevance. Specific AI software tools include expert systems and pattern recognition systems. Expert systems are capable of accumulating the knowledge and skills of experts in a particular field and applying them to solve practical problems, for example, in geology, medicine and the chemical industry. AI research is divided into two main areas: top-down (semiotic), aimed at creating expert systems and logical inference systems, and bottom-up (biological), which studies neural networks and evolutionary computing. Neural networks have proved to be promising for solving such tasks as financial forecasting, network control, data encryption, and system diagnostics. Evolutionary computing also has significant potential, especially in the context of nanotechnology development and solving problems of self-organisation of systems. In recent years, there has been a significant increase in investment in AI, which indicates a great interest in this industry. Companies such as Microsoft, IBM, Samsung, Qualcomm, and Google are leaders in the development of AI technologies. Ukraine is also actively developing the AI industry, and the country is one of the leading countries in Eastern Europe in terms of the number of companies operating in this field. In general, the prospects for AI development are associated with further growth in computing power, improvement of algorithms, and deeper understanding of the principles of human intelligence. This paves the way for the creation of even more powerful and efficient intelligent systems capable of solving complex problems and benefiting society [16].

Given the active development and significant investments in the field of artificial intelligence both globally and in Ukraine, we can already observe specific examples of successful application of these technologies to optimise and improve the efficiency of accounting at enterprises of various sizes. Specific examples of AI application in accounting are shown in Table 2.

Table 2. Examples of Artificial Intelligence in Accounting

AI Application Area in Accounting	Company Example	Problem	AI Solution	Result
Document processing automation	Large retail chain	Significant time consumption and errors during manual data entry from invoices	AI system for automatic scanning, recognition, and processing of data (amounts, dates, details)	Reduced processing time and fewer input errors
Fraud detection	Banking institution	Increase in fraudulent credit card transactions	Machine learning-based fraud detection system that analyses transactions in real time	Reduction in fraud cases and financial losses
Cash flow forecasting	Manufacturing enterprise	Difficulty in accurate forecasting due to numerous influencing factors	AI platform for analysing historical data, production indicators, and macroeconomic trends	Improved accuracy of cash flow forecasts and enhanced financial planning
Bank statement reconciliation automation	E-commerce company	High volume of daily transactions, complexity of manual reconciliation	AI tool for automatically matching bank statements with accounting records and identifying discrepancies	Shorter reconciliation time and improved data accuracy
Customer/employee support	Large corporation	High volume of routine queries to the accounting department	AI-based chatbot for automatically answering typical questions regarding financial reporting, accounting policies, etc.	Reduced workload for the accounting team, improved speed and quality of service

Source: authors' own elaboration

The rapid development and significant investment in the field of artificial intelligence (AI), both globally and in Ukraine, already demonstrate concrete examples of the successful application of these technologies to optimise and enhance the efficiency of accounting across enterprises of various scales.

One of the key advantages of AI is the automation of document processing. For instance, large retail chains often face substantial time costs and errors during the manual entry of invoice data. The implementation of an AI system capable of automatically scanning, recognising, and processing such data (amounts, dates, details) allows for a significant reduction in processing time and minimises input errors.

Similarly, the automation of bank statement reconciliation is critically important for companies with a high volume of daily transactions, such as those operating in e-commerce. Manual reconciliation in such cases is complex and time-consuming. AI tools automatically match bank statements with accounting records and identify discrepancies, which significantly reduces reconciliation time and improves the accuracy of accounting data.

AI plays a crucial role in fraud detection. Banking institutions facing an increase in fraudulent credit card transactions utilise machine learning-based fraud detection systems. These systems analyse transactions in real time, resulting in a decrease in fraudulent activity and a reduction in financial losses.

In addition, AI greatly improves cash flow forecasting. Manufacturing enterprises often struggle to forecast accurately due to the multitude of factors influencing financial flows. AI platforms analyse historical data, production metrics, and macroeconomic trends, thereby increasing forecast accuracy and enhancing financial planning.

AI is also transforming internal and external interactions through customer and employee support. Large corporations, whose accounting departments are burdened with routine queries, are implementing AI-powered chatbots. These bots automatically respond to frequently asked questions regarding financial reporting or accounting policies, thus reducing the workload on accounting staff and improving the speed and quality of service.

These examples clearly show that artificial intelligence is already effectively assisting Ukrainian companies in automating routine processes such as primary document processing and bank reconciliation. This leads to a notable reduction in time expenditure and a minimisation of human error, both of which are critical to ensuring accounting data accuracy.

Therefore, artificial intelligence (AI) is no longer merely a tool for automating routine tasks but is evolving into a powerful driver of strategic financial management. It not only streamlines processes but also delivers in-depth analytical insights, enabling leadership to make more informed and forward-looking decisions. With AI, companies can better forecast market trends, manage risks more effectively, and identify new growth opportunities – opening new horizons for improving efficiency and competitiveness in today's market.

To gain a comprehensive understanding of AI's impact on accounting activities, the key advantages and disadvantages of using AI technologies in accounting are summarised in Table 3.

Table 3. Advantages and Disadvantages of Using Artificial Intelligence Technologies in Accounting

Advantages	Disadvantages
Automation of repetitive tasks and financial reporting preparation: AI can automate routine and labour-intensive tasks such as data entry, account reconciliation, and generation of standard reports, freeing up accountants' time for more complex responsibilities.	Significant financial investment required for implementation and training: Integrating AI systems involves substantial investment in software, hardware, and staff training, which may pose a barrier.
Rapid processing of large volumes of data and operational optimisation: AI can analyse massive amounts of financial data in seconds, identifying trends and anomalies, which significantly enhances efficiency and accuracy.	Limited number of qualified AI specialists: There is a shortage of professionals who possess both accounting knowledge and AI-related skills, complicating effective implementation and maintenance of such systems.
Accurate forecasting based on mathematical models: Through machine learning algorithms, AI can produce more precise financial forecasts by analysing historical data and identifying correlations, enabling more informed strategic decisions.	Risks related to the protection of confidential information: Storing and processing large volumes of financial data with AI systems increases the risk of data breaches and cyberattacks. Ensuring robust data protection is essential.
Informed decision-making based on accounting data: AI provides management with detailed and timely information derived from accounting records, improving the quality of managerial decisions.	Dependence on stable internet connectivity: Many AI solutions operate on cloud platforms, requiring a stable and high-speed internet connection to function properly.
Reduced workload for accountants: Automation of routine tasks significantly reduces the amount of manual work, allowing accountants to focus on strategic planning, analysis, and advisory activities.	Lack of human judgement and ethical considerations: While AI can process data and detect patterns, it lacks intuition, empathy, and the ability to make ethical judgements, which are essential in complex decision-making.
Automatic error detection in documentation: AI can effectively identify errors, inconsistencies, and potential fraud in financial documents, ensuring high accuracy and reliability in accounting.	Potential job displacement for routine accounting tasks: While AI frees accountants for more complex work, there is a risk that automation may lead to a reduction in jobs related to routine operations.
Provision of analytical and forecasting advice to clients: With the capabilities of AI, accountants can deliver deeper analytical reports and forecasts, transforming their role from mere bookkeepers to strategic advisors.	

Source: authors' own elaboration

Thus, the implementation of artificial intelligence (AI) technologies in accounting plays a key role in enhancing the efficiency of accounting processes. Through the automation of routine tasks, rapid processing of large data volumes, reduction of staff workload, and the ability to support well-informed managerial decisions, AI opens up new horizons for the development of the accounting profession. Such systems are capable not only of accelerating the execution of standard tasks but also of delivering a higher level of accuracy – a particularly important factor given the growing demands for financial reporting and tax transparency.

Moreover, the adoption of AI facilitates a shift from traditional accounting to analytical accounting: professionals gain the ability to identify trends faster, assess risks, forecast financial results, and prepare strategic recommendations for management. This transforms the accountant's role – from a record-keeper to a consultant and decision-making partner. In the long term, AI creates the conditions for building an accounting ecosystem that is adaptive, transparent, and resilient to changes in the external environment.

However, certain risks must also be taken into account, particularly those related to the human factor. Overreliance on digital solutions can reduce professional attentiveness, lead to the erosion of critical thinking skills, and foster a psychological dependency on technology. In some cases, AI may even provoke professional inertia and complacency: employees may consciously avoid analytical tasks, shifting responsibility to algorithms. This simplified perception of technology can result in incorrect decisions in situations that go beyond standard scenarios, as no algorithm can fully replace human intuition, ethical sensitivity, and lived experience.

Information security, confidentiality of financial data, and the need for periodic technological updates should also be considered. Outdated algorithms or systems that are not adapted to local specifics may introduce additional risks to accounting activities.

Despite these challenges, when used responsibly, AI technologies – including tools such as ChatGPT – offer undeniable benefits. They do not replace accountants but significantly enhance their analytical capabilities, freeing time for strategic thinking, learning, professional development, and a greater focus on the value-adding aspects of their work. This creates the foundation for more effective financial management, resource optimisation, and long-term competitiveness of an enterprise.

Conclusions

The conducted research confirms the significant potential of artificial intelligence to radically transform accounting. The analysis of AI capabilities demonstrates its ability not only to automate routine tasks – greatly improving data processing speed and accuracy – but also to expand the analytical potential of accountants by providing tools for in-depth financial analysis and well-informed decision-making.

The implementation of AI in accounting practices is already a global trend, as evidenced by the rapid growth of the relevant market and the increasing interest from the professional community. The benefits of using AI are evident: automation of repetitive operations, fast processing of large volumes of data, accurate forecasting, informed decision-making, reduced workload for accountants, and automatic error detection.

At the same time, the study has identified potential challenges and risks associated with AI implementation, including substantial financial investment, a limited number of qualified specialists, data protection concerns, and reliance on stable internet connectivity. Particular attention should be paid to the human factor and the potential decline in professional attentiveness due to excessive reliance on AI.

Nevertheless, with responsible use, AI technologies – including tools such as ChatGPT, Rossum, Expensify, and MindBridge – demonstrate undeniable advantages. They significantly enhance accountants' analytical capacities and free up their time for strategic thinking.

Practical examples of AI adoption in both Ukrainian and international companies confirm its effectiveness in automating document processing, detecting fraud, forecasting cash flows, automating bank statement reconciliation, and supporting clients.

Further deep integration of AI into accounting is expected, with broader application scopes and tighter integration with existing software solutions. This will require accountants not only to be technically proficient but also to adopt a new culture of responsible digital tool usage, alongside continuous learning and upskilling.

Thus, the use of artificial intelligence is no longer merely a supplementary tool but has become an integral part of the modern accounting system, opening up new possibilities for improving enterprise efficiency, accuracy, and competitiveness. Successful implementation of AI requires company leadership to clearly define business needs, make informed technological choices, and ensure proper oversight of system usage.

Abstract

In the context of rapid technological progress, artificial intelligence (AI) is increasingly becoming an essential tool in the field of accounting, profoundly transforming traditional practices and redefining the role of financial professionals. Modern accounting is no longer limited to manual bookkeeping or repetitive tasks; instead, it is evolving into a data-driven and strategically focused function. AI acts as a catalyst for this transformation, offering unprecedented capabilities for automation, data analysis, and decision support.

The application of AI technologies enables the automation of routine and time-consuming accounting processes, such as the classification and processing of primary documentation, preparation of financial statements, tax calculations, reconciliation procedures, and error detection. As a result, organizations benefit from increased

speed, consistency, and accuracy in their financial operations. AI-powered systems can work continuously without fatigue, identify anomalies in vast datasets, and adapt to new regulations or business rules, significantly reducing the likelihood of human error.

Moreover, AI's ability to learn from data and identify complex patterns allows for continuous optimization of accounting workflows. Through the use of machine learning algorithms and natural language processing, AI systems are able to refine their operations over time, improving both the efficiency and reliability of the tasks they perform. This not only streamlines operations but also supports more timely and data-informed decision-making, which is critical in today's fast-paced and competitive business environment.

AI is no longer seen as a distant future trend but has firmly established itself as a current necessity for organizations aiming to enhance productivity and ensure compliance. Its integration into accounting systems facilitates access to real-time financial insights, enabling proactive management and more accurate forecasting. In this context, accountants are increasingly transitioning from traditional roles toward more strategic positions as analysts, advisors, and data interpreters.

Given the growing relevance and impact of this technological shift, the purpose of the article is to explore the potential of AI in accounting, analyze its benefits and associated risks, and provide practical recommendations for effective implementation. The study investigates how AI contributes to various aspects of accounting, including financial data analysis, risk assessment, fraud detection, and long-term strategic planning. Special attention is paid to contemporary AI tools such as ChatGPT, Rossum, MindBridge, and other platforms that are already demonstrating real-world effectiveness in tasks like automated reporting, anomaly detection, and internal or external stakeholder communication.

The findings of the study indicate several key advantages of AI integration in accounting. These include enhanced operational efficiency, improved accuracy and reliability of financial data, reduced manual workload, and increased accessibility to real-time information. Additionally, AI facilitates better compliance with regulatory standards and improves the overall transparency of financial reporting.

However, the study also identifies a number of challenges that must be addressed to ensure successful AI adoption. These include the need for substantial financial investments in infrastructure and software, a lack of qualified personnel with both technical and accounting expertise, potential threats to data privacy and cybersecurity, as well as the danger of excessive reliance on automated systems without proper human oversight. These factors underscore the importance of a balanced, well-structured approach to implementation.

To this end, the article emphasizes the necessity of ensuring organizational, technical, and ethical preparedness. Successful AI integration requires not only technological readiness but also changes in corporate culture, staff training, transparent governance practices, and the establishment of ethical guidelines to ensure responsible use of AI.

In conclusion, the study highlights that the adoption of AI in accounting is not merely a technological upgrade but a fundamental shift in how financial operations are conducted. This shift enhances the quality, accuracy, and transparency of financial information while simultaneously elevating the strategic importance of the accounting function. As organizations continue to pursue digital transformation, the intelligent use of AI will be key to achieving greater competitiveness, agility, and long-term sustainability in a digital economy.

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