

# Exploring the Opportunities and Obstacles of Implementing Artificial Intelligence in Accounting and Auditing

Liudmyla Sakhno<sup>1,\*</sup>, Yarmila Tkach<sup>2</sup>, Dmytro Sushko<sup>3</sup>, Larysa Ocheretko<sup>4</sup>, Yevhen Shevchenko<sup>5</sup>

<sup>1</sup>Candidate of Economic Sciences, Associate Professor of the Department of Finance, Accounting and Taxation, Faculty of Economics and Business, Dmytro Motornyi Tavria State Agrotechnological University, Zaporizhzhia, Ukraine

<sup>2</sup>PhD, Associate Professor, Associate Professor of Accounting and Taxation Department, Economics and Management Faculty, Sumy National Agrarian University, Sumy, Ukraine

<sup>3</sup>Candidate of Economic Sciences, Associate Professor, Doctoral Student of the Department of Management, Marketing and Public Administration, Higher Educational Institution "Academician Yuriy Bugay International Scientific and Technical University", Kyiv, Ukraine

<sup>4</sup>Candidate of Economic Sciences, Associate Professor, Associate Professor of the Department of Accounting and Finance, National University "Zaporizhzhia Polytechnic", Zaporizhzhia, Ukraine

<sup>5</sup>Postgraduate Student, Economic Cybernetics Department, ERI of Business, Economics and Management, Sumy State University, Sumy, Ukraine

\* Corresponding Author: [sakhnolyudmila5@gmail.com](mailto:sakhnolyudmila5@gmail.com)

## ARTICLE INFO

## ABSTRACT

Received: 09 Oct 2024

Revised: 11 Dec 2024

Accepted: 20 Dec 2024

**Introduction:** Artificial intelligence technologies are being introduced into the economic sector due to the possibilities of automating processes. However, conservative views on using the latest technologies characterise accounting and auditing. This is because there is a risk of errors and confidential data leakage. Nevertheless, artificial intelligence is gradually being introduced into financial accounting and auditing, and today it is indispensable for some processes.

**Objectives:** Our study aimed to determine the level of implementation of artificial intelligence technologies in accounting and auditing based on the survey results and identify the main factors influencing the level of artificial intelligence application in practice.

**Methods:** To achieve this goal, the following methods were used: analysis, synthesis, induction, systematisation, and a survey of 947 respondents, including business people, business consultants, accountants, and auditors.

**Results:** The survey results indicated a high level of use of artificial intelligence among business consultants and auditors, and the types of artificial intelligence were dominated by expert systems, machine learning, and customer support. At the same time, they identified a low level of use of complex systems, such as neural networks, blockchain technologies, and hybrid systems, against the background of low awareness among accountants and business people, accountants' fear of losing their jobs, and entrepreneurs' distrust of data protection and the potential for errors when using artificial intelligence.

**Conclusions:** Thus, it is advisable to train accountants to help them adapt their professional activities to the current requirements of society and to encourage auditors and business consultants to advise entrepreneurs.

**Keywords:** surveys, business consultants, accountants, auditors, entrepreneurs, expert systems, machine learning, autonomous robotic systems, neural networks, blockchain technologies, hybrid systems, cybersecurity.

## INTRODUCTION

Artificial intelligence is being actively implemented in various areas of activity, including the financial system. The AI capabilities make it possible to speed up and automate various processes, reduce staff workload and improve work quality. The application of AI in accounting and auditing has been gradual, as there were specific concerns about the use of AI in this area. Despite the hesitations about the advantages and disadvantages of artificial intelligence, accounting uses its capabilities. However, there are doubts about the security and risks associated with its use, which

justifies the relevance of researching this issue. At the same time, the diversity of AI systems and functions poses new challenges for the financial system: addressing the feasibility and risks of implementing different types of AI.

### LITERATURE REVIEW

Artificial intelligence has emerged in response to the requirements of modern society, which is actively familiarising itself with the latest technologies in various industries. Artificial intelligence is a complex system that analyses a large amount of data and processes information using machine learning technologies to structure, perform tasks, and make predictions **Error! Reference source not found..** The capabilities of artificial intelligence have increased significantly in recent years, bringing its functioning closer to that of humans by gaining the ability to adapt, flexibility, and learn from mistakes **Error! Reference source not found..** Artificial intelligence has become an integral part of the business environment and is used in production, sales, marketing, human resources, accounting, and distribution. There is no need to apply all possible AI functions for accounting and auditing, but without AI tools, progress and automation of accounting activities are impossible **Error! Reference source not found..**

The impetus for introducing AI technologies in accounting and auditing was the growth in the number and changes in accounting rules, which caused audit failures as auditors did not have time to adapt to such dynamic changes **Error! Reference source not found..** However, the prevalence of various audit software and the lack of knowledge about their use has led to the fact that AI technologies are still not widely used in accounting and auditing. Although artificial intelligence capabilities undoubtedly have several advantages, such as the ability to analyse numbers, transform images and textual information, perform various digital database operations and automate repetitive processes, they cannot replace human qualities in work.

Artificial intelligence far exceeds human capabilities in examining and structuring information when dealing with large databases. However, risks are associated with detecting errors and false and fraudulent information, which requires critical thinking that artificial intelligence is primarily incapable of **Error! Reference source not found..** Nevertheless, when combined with human resources, AI can bring many benefits, as systematic errors or deviations can be tracked by AI and evaluated by the auditor for fraud or inaccuracy **Error! Reference source not found..** Such cooperation is possible only if qualified employees know how to manage the capabilities of artificial intelligence. This thesis raises another challenge - training accountants and auditors in cooperation with artificial intelligence. Such training requires an interdisciplinary approach, replacing outdated methods of accounting education. An important area of training for students in accounting, auditing, legal accounting, and accounting consulting is the possession of skills in questioning, scepticism, analysis, discussion of results, and critical thinking. While analysis, questioning and scepticism receive much attention, communication and critical thinking skills remain low **Error! Reference source not found., Error! Reference source not found..** However, communication and critical thinking are indispensable human qualities that artificial intelligence cannot replace.

Machine learning and deep learning are indispensable in data processing, allowing for calculations, identifying patterns, and making predictions based on extensive data analysis. In accounting, machine learning is implemented to perform such functions as reviewing source data, calculating business transactions, analysing risks, predicting bankruptcy, and detecting fraud and inaccurate data **Error! Reference source not found..** Machine learning allows for the analysis of complex nonlinear relationships and processes, analysing big data and alternative data **Error! Reference source not found., Error! Reference source not found..** For auditing, an inductive analysis method is a valuable machine learning tool for summarising information from analysing individual factors. However, one of the challenges of machine and deep learning is the limited ability to analyse behavioural aspects against the backdrop of dynamic market and customer changes. Another aspect is the bias of this subtype of artificial intelligence and the ethical aspect.

The most commonly used are expert systems that contain data that, based on analysis and comparison, allow an expert to form an empirical opinion on a topic. In accounting, expert systems perform financial control functions and assist in generating reports, processing invoices, and evaluating standards. Expert systems provide planning and risk assessment in auditing and generate audit opinions and reports **Error! Reference source not found..** To increase the effectiveness of expert systems, they are combined with decision support systems, which focus on alternative solutions, as opposed to expert systems that are programmed to make standard and universal decisions **Error! Reference source not found..**

Automation of robotic processes is a simple yet effective tool for data entry and collection, which can reduce the time of this operation. Automated bots have increased the efficiency of employees in computing, forecasting, and risk assessment, as they have relieved employees of their workload. However, it is essential to assess the risks associated with bots, which must be authorised and verified as they have access to confidential information and transactions **Error! Reference source not found..** At the same time, researchers point out the limitations of automated robotic processes that can process the most straightforward information while essential functions such as tax, consulting, and warranty services remain low **Error! Reference source not found., Error! Reference source not found..**

A new and promising artificial intelligence tool in accounting and auditing is blockchain technology, a series of continuous chains of information that allows for accounting transactions, triple-entry accounting and real-time auditing **Error! Reference source not found..** Blockchain technology opens up new horizons for accounting and auditing, enabling a continuous process. This tool is valuable for real-time audits rather than sample-based audits and provides the ability for instant third-party verification, independent data extraction, and transaction analysis. However, this technology is not currently adapted to professional audit and accounting standards, as it requires changes in the characteristics of corporate reporting, payment transactions, and audit evidence. Blockchain also allows for a change in the approach to cooperation between different organisations and establishes smart contracts **Error! Reference source not found..** Another aspect that prevents the rapid implementation of blockchain in the financial system is the problem of cybersecurity and access to confidential data, which requires control over these risks for the prospect of implementing the technology in practice **Error! Reference source not found..**

Neural networks are a complex technology consisting of many connections that can analyse and synthesise information by performing many tasks, which resembles the human brain's capabilities. Neural networks are essentially machine learning and deep learning at a higher level. In combination with neural networks, deep learning can reduce accounting errors and speed up the accounting process and computations through automation. The authors recommend analysing accounting transaction codes using several artificial intelligence methods, such as the Inception V3 feature extractor, SqueezeNet neural network classifier, DeepLoc networks, and Painter's image recognition. Neural networks can reduce the number of errors. However, researchers are hesitant to claim superiority over traditional ratio and regression analysis, instead describing the random procedure as the most accurate **Error! Reference source not found., Error! Reference source not found..** Hybrid systems deal with many tasks, including quantitative and qualitative analysis **Error! Reference source not found..** Furthermore, the combination of different types of artificial intelligence includes the use of artificial intelligence aids in accounting and auditing, such as natural language processing, image, speech, text recognition, and customer support that extend the functionality of artificial intelligence.

Another sophisticated technology that involves classification and prediction is the genetic algorithm, which is based on a natural selection approach. Genetic algorithms can detect fraud, especially large-scale fraud, to reproduce credit ratings and to predict auditors' behaviour when data inconsistencies are detected **Error! Reference source not found., Error! Reference source not found..** Despite the capabilities of artificial intelligence technologies, there are still limitations, particularly the bias of technologies that exclude an individual approach to work. In order to reduce the risk of standardisation, artificial intelligence uses fuzzy logic technology to bring software closer to the level of human cognitive capabilities and to counteract fraud. After all, fraudulent schemes are guided by logic, and fuzzy logic technologies help to identify questionable transactions.

As the literature review shows, artificial intelligence technologies are constantly evolving and improving. However, the practical application of artificial intelligence in accounting and auditing is still limited. This fact justifies the expediency of identifying the main factors contributing to the low level of implementation of the latest artificial intelligence technologies in the financial sector.

The study aimed to determine the level of implementation of artificial intelligence technologies in accounting and auditing based on the survey results and identify the main factors influencing the level of application of artificial intelligence in practice.

## METHODS

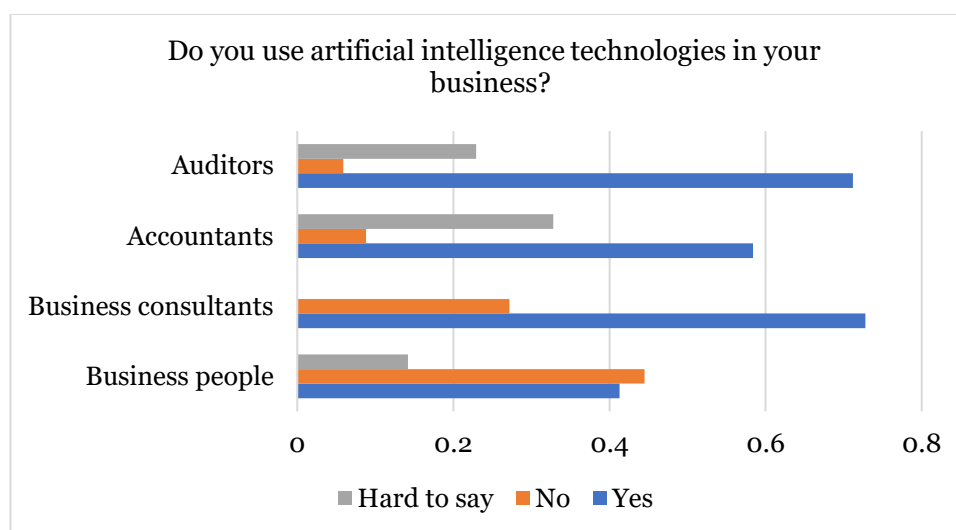
The study used the methods of analysis, synthesis, induction, systematisation and survey. A confidential survey of 947 respondents was conducted on the Google platform between June and September 2024, adhering to ethical

standards for conducting surveys and publishing their results to achieve the research objective. An example of the questionnaire is provided in Appendix 1. The average age of the respondents was 44.5+12.4 years; 577 (60.9%) were women, and 370 (39.1%) were men. The respondents were divided into groups depending on their type of activity, namely businessmen 254 (26.8%), business consultants 169 (17.9%), accountants 305 (32.2%) and auditors 219 (23.1%). The survey results are presented in the form of graphs.

Congue nisi vitae suscipit tellus mauris a diam maecenas. Aliquet nec ullamcorper sit amet risus. Pulvinar sapien et ligula ullamcorper malesuada proin libero nunc consequat. Non consectetur a erat nam at lectus urna dui convallis. Purus viverra accumsan in nisl nisi scelerisque eu. Netus et malesuada fames ac turpis egestas maecenas pharetra convallis. Sed turpis tincidunt id aliquet. Et malesuada fames ac turpis egestas sed tempus urna et. In dictum non consectetur a erat nam at. Nulla aliquet porttitor lacus luctus accumsan tortor posuere. Nunc consequat interdum varius sit amet mattis vulputate enim nulla. Cras tincidunt lobortis feugiat vivamus. Venenatis a condimentum vitae sapien pellentesque habitant morbi. Suscipit adipiscing bibendum est ultricies integer. Et ultrices neque ornare aenean. Ut porttitor leo a diam sollicitudin tempor id eu. Lorem ipsum dolor sit amet consectetur adipiscing elit. Morbi tincidunt ornare massa eget egestas purus viverra accumsan in. Sit amet consectetur adipiscing elit dui tristique.

## RESULTS

To determine the level of use of artificial intelligence technologies in accounting and auditing, we conducted a survey of businessmen, business consultants, accountants and auditors, which included the following questions: "Do you use artificial intelligence technologies in your business?", "What types of artificial intelligence do you use?", "What is your attitude to the development of artificial intelligence technology in your professional activity?", "Which artificial intelligence technologies do you find most useful?". The survey results are presented in Figures 1, 2, 3, 4.

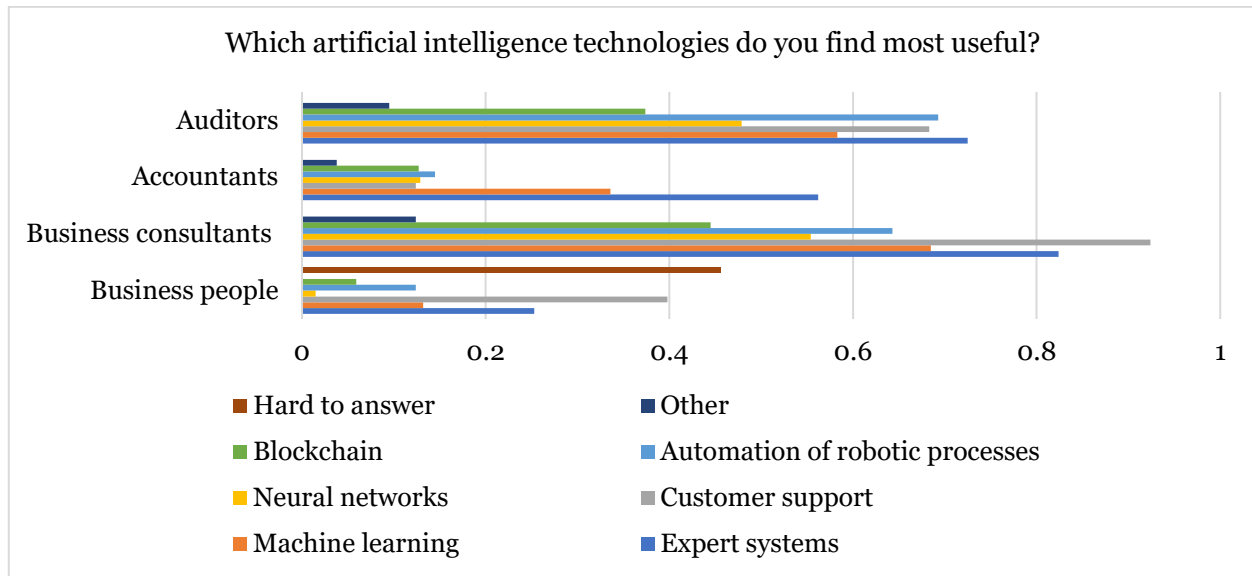


**Figure 1.** Survey results on the use of artificial intelligence in professional activities

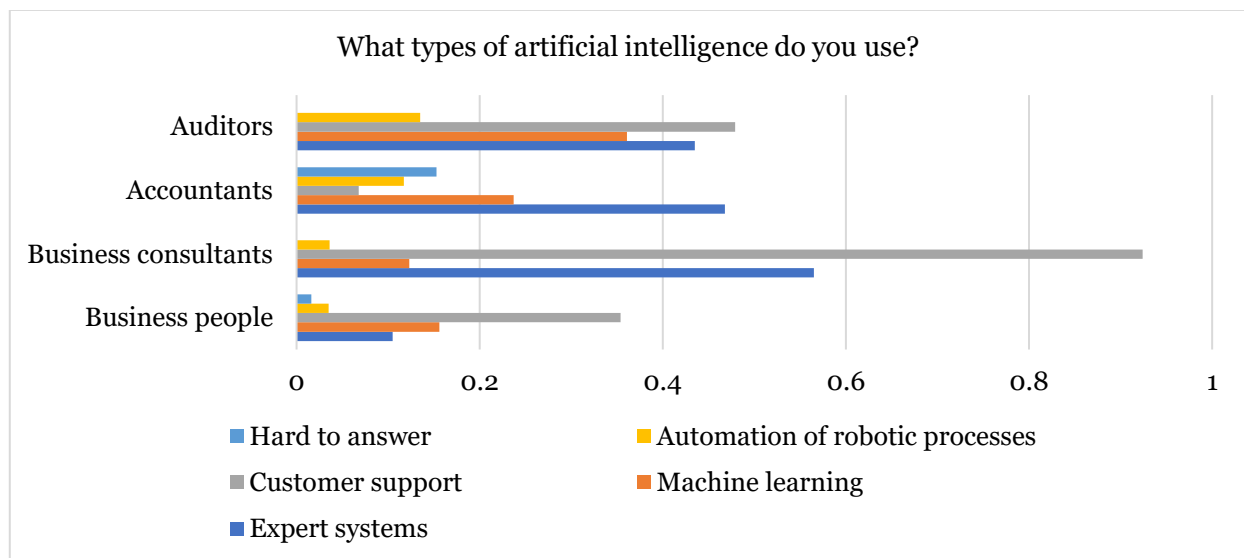
As can be seen from Figure 1, the highest percentage of AI use in professional activities is observed among auditors and business consultants, which confirms the importance of AI technologies for audit and consulting. After all, changes in standards and taxation increased the burden on the audit service, which encouraged them to look for technologies that would optimise calculation and analysis processes to increase the time for assessing new standards and comparing them with tax legislation. At the same time, the high level of AI use among business consultants confirms the importance of consulting in planning and monitoring business activities. Furthermore, it indicates the high professionalism of consultants who actively apply the latest technologies.

The lowest level of use of artificial intelligence assessed by business people indicates low awareness among business people of the possibilities of artificial intelligence in optimising accountants' work and doing business. At the same time, many accountants could not answer yes or no to the question about using AI technologies in their activities.

This indicates low motivation among accountants to work with new technologies and learn. The results of answers to the following questions confirmed these conclusions.



**Figure 2.** Types of artificial intelligence used by respondents

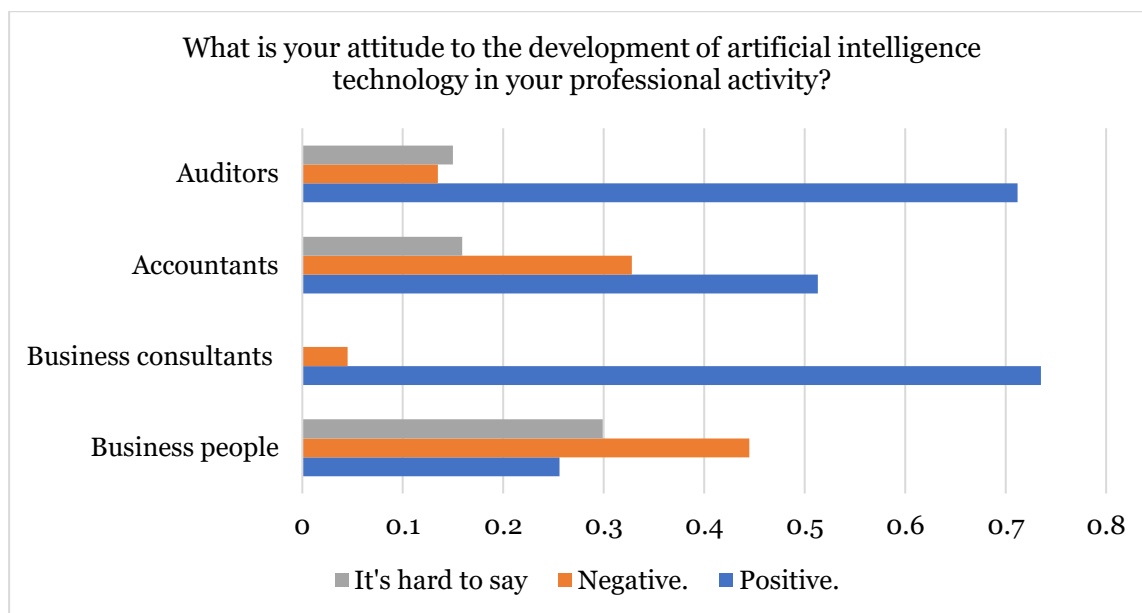


**Figure 3.** Respondents' awareness of the types of artificial intelligence and their benefits

As can be seen from Figure 2, expert systems, customer support services, and machine learning are the most widely used among respondents. As for the awareness of artificial intelligence, the survey showed the most significant awareness of the types of artificial intelligence and their application among business consultants and auditors (Figure 3). The respondents are most interested in using expert systems, machine learning, automated robotic systems and customer support services. Business consultants and auditors also identified promising and effective blockchain and neural network technologies. In contrast, accountants and businesspeople had little knowledge about complex systems such as blockchain and neural networks. Many business people could not name any artificial intelligence technology that justifies using consultants among this group of respondents to optimise business accounting and auditing.

Regarding attitudes towards the possibilities of artificial intelligence in accounting and auditing, auditors and business consultants expressed the most optimistic assessment. This indicates a high awareness among these groups

of the possibilities of artificial intelligence and high motivation to learn how to work with new technologies. As for accountants, a third of respondents have a negative attitude towards using artificial intelligence, which was justified by fears of job losses due to the automation of accounting processes. Among business people, most respondents were against using new technologies, citing concerns about the security of confidential data, increased costs of software updates, and the likelihood of errors that could lead to heavy fines (Figure 4).



**Figure 4.** Attitudes towards accounting and auditing

Thus, the results of our study indicated a high level of artificial intelligence use dominated by expert systems, machine learning, and customer support. At the same time, complex artificial intelligence systems, such as neural networks, blockchain technologies, and hybrid systems, are not widely used in practice due to low awareness of entrepreneurs concerns about their effectiveness and security among entrepreneurs and low knowledge of accountants about the benefits of their use. Therefore, according to the study, it is advisable to increase the awareness of accountants and business people about the latest artificial intelligence technologies to encourage entrepreneurs to use the services of business consultants and auditors who have a great practical and theoretical level of knowledge about the possibilities of artificial intelligence for accounting and auditing.

## DISCUSSION

Artificial intelligence has become widespread in all sectors of economic activity, thanks to the increased opportunities for automation and process optimisation. The most important is using Internet of Things systems for sales, chatbots for customer support and general artificial intelligence for marketing **Error! Reference source not found..** However, introducing the latest technologies in accounting and auditing is more gradual and cautious due to the high cost of error, which can lead to the loss of confidential data, increased fraud, transaction errors, and tax violations. Numerous studies have shown a decreased error rate when using complex artificial intelligence systems **Error! Reference source not found., Error! Reference source not found..** The literature also describes the positive impact of artificial intelligence on the fight against fraud, data inaccuracy, and corruption **Error! Reference source not found., Error! Reference source not found..**

Our research also revealed low awareness of and application of complex artificial intelligence systems, namely neural networks, hybrid systems, genetic algorithms, and blockchain technologies. The literature also describes a low level of adoption of these technologies, which is explained by the new accounting and auditing requirements for using these systems, which require a long transformation. However, not only do changes in approaches hinder the implementation of complex systems, including blockchain, in financial monitoring practice, it is essential to reach a consensus between developers of complex systems and accounting experts. Reducing information



misunderstandings between programmers and accountants is necessary by organising joint conferences and consultations that will allow for consensus building **Error! Reference source not found..**

Another aspect of accountants' negative attitude towards AI is the fear of losing their jobs. However, research shows that technology cannot replace human intelligence and that professionals need to improve their knowledge of AI **Error! Reference source not found..** The business people interviewed also expressed doubts about the introduction of artificial intelligence, in particular because of the possibility of errors that carry the risk of penalties, the rising costs of updating the artificial intelligence system, and the distrust in protecting confidential data. Similar shortcomings are also described in the literature, especially cybersecurity **Error! Reference source not found., Error! Reference source not found..**

## CONCLUSION

Our survey revealed high AI use among auditors and business consultants. We identified a sufficient level of AI use among accountants and business people. Expert systems, machine learning, and customer support were identified as the predominant types of artificial intelligence used in practice. At the same time, business consultants and auditors were found to be highly aware of complex artificial intelligence systems, such as neural networks, blockchain technologies and automatic robotic systems, which are still not widely used, in particular, due to the low level of knowledge of accountants about working with them and the low interest of entrepreneurs in their implementation in practice. Therefore, it is advisable to provide training for accountants on the specifics of complex artificial intelligence systems and encourage entrepreneurs to use the services of business consultants who, against the background of a high level of theoretical and practical knowledge, will be able to justify the need to use complex artificial intelligence systems to optimise the company's operations. Another aspect is the development of accountants' motivation to implement AI innovations, which can be achieved through training and dispelling fears of AI replacing human resources. In turn, training business people will also help increase confidence in artificial intelligence's capabilities, especially in terms of cybersecurity and the likelihood of error.

## REFERENCES

- [1] Zhang, Y.; Xiong, F.; Xie, Y.; Fan, X.; & Gu, H. The Impact of Artificial Intelligence and Blockchain on the Accounting Profession. *IEEE Access*, 2020, 8, 110461-110477. <https://doi.org/10.1109/ACCESS.2020.3000505>
- [2] Lee, C. S.; & Tajudeen, F. P. Usage and Impact of Artificial Intelligence on Accounting: 213 Evidence from Malaysian Organisations. *Asian Journal of Business and Accounting*, 2020, 13, 213-240. <https://doi.org/10.22452/ajba.vol13no1.8>
- [3] Hasan, A. R. Artificial Intelligence (AI) in accounting & auditing: A Literature review. *Open Journal of Business and Management*, 2021, 10(1), 440-465 <https://doi.org/10.4236/ojbm.2022.101026>
- [4] Lamboglia, R.; Lavorato, D.; Scornavacca, E.; & Za, S. Exploring the relationship between audit and technology. A bibliometric analysis. *Meditari Accountancy Research*, 2021; 29(5), 1233-1260 <https://doi.org/10.1108/MEDAR-03-2020-0836>
- [5] Agustí, M. A.; & Orta-Pérez, M. Big data and artificial intelligence in the fields of accounting and auditing: a bibliometric analysis. *Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad*, 2023, 52(3), 412-438. <https://doi.org/10.1080/02102412.2022.2099675>
- [6] Ibrahim, A. E. A.; Elamer, A. A.; & Ezat, A. N. The convergence of big data and accounting: innovative research opportunities. *Technological Forecasting and Social Change*, 2021, 173, 121171. <https://doi.org/10.1016/j.techfore.2021.121171>
- [7] McBride, K.; & Philippou, C. "Big results require big ambitions": Big data, data analytics and accounting in masters courses. *Accounting Research Journal*, 2022, 35(1), 71-100. <https://doi.org/10.1108/ARJ-04-2020-0077>
- [8] Qasim, A.; & Kharbat, F. F. Blockchain technology, business data analytics, and artificial intelligence: Use in the accounting profession and ideas for inclusion in the accounting curriculum. *Journal of emerging technologies in accounting*, 2020, 17(1), 107-117. <https://doi.org/10.2308/jeta-52649>
- [9] Cho, S.; Vasarhelyi, M. A.; Sun, T.; & Zhang, C. Learning from machine learning in accounting and assurance. *Journal of Emerging Technologies in Accounting*, 2020, 17(1), 1-10. <https://doi.org/10.2308/jeta-10718>
- [10] Kapoor, I. S.; Bindra, S.; & Bhatia, M. Machine Learning in Accounting & Finance: Architecture, Scope & Challenges. *International Journal of Business and Management*, 2022, 17(5). <https://doi.org/10.5539/ijbm.v17n5p13>

- [11] Koc D.; & Koc F. A Machine Learning and Deep Learning-Based Account Code Classification Model for Sustainable Accounting Practices. *Sustainability*, 2024, 16(20), 8866. <https://doi.org/10.3390/su16208866>
- [12] Gaber, M.; & Lusk, E. J. Vetting client datasets using an audit decision support system: an enhancement in creating audit-evidence. In *Auditing Ecosystem and Strategic Accounting in the Digital Era: Global Approaches and New Opportunities* (pp. 231-251). Cham: Springer International Publishing, 2021. <https://doi.org/10.1016/j.dss.2020.113402>
- [13] Harrast, S. A. Robotic process automation in accounting systems. *Journal of Corporate Accounting & Finance*, 2020, 31(4), 209-213. <https://doi.org/10.1002/jcaf.22457>
- [14] Cooper, L. A.; Holderness Jr, D. K.; Sorensen, T. L.; & Wood, D. A. Robotic process automation in public accounting. *Accounting Horizons*, 2019, 33(4), 15-35. <https://doi.org/10.2308/acch-52466>
- [15] Zhang, C.; Issa, H.; Rozario, A.; & Soegaard, J. S. Robotic process automation (RPA) implementation case studies in accounting: A beginning to end perspective. *Accounting Horizons*, 2023, 37(1), 193-217. <https://doi.org/10.2308/HORIZONS-2021-084>
- [16] Han, H.; Shiwakoti, R. K.; Jarvis, R.; Mordi, C.; & Botchie, D. Accounting and auditing with blockchain technology and artificial intelligence: A literature review. *International Journal of Accounting Information Systems*, 2023, 48. <https://doi.org/10.1016/j.accinf.2022.100598>
- [17] Hamilton, M. Blockchain distributed ledger technology: An introduction and focus on smart contracts. *Journal of Corporate Accounting & Finance*, 2020, 31(2), 7-12. <https://doi.org/10.1002/jcaf.22421>
- [18] Demirkan, S.; Demirkan, I.; & McKee, A. Blockchain technology in the future of business cyber security and accounting. *Journal of Management Analytics*, 2020, 7(2), 189-208. <https://doi.org/10.1080/23270012.2020.1731721>
- [19] Li, S.; Fisher, R.; & Falta, M. The effectiveness of artificial neural networks applied to analytical procedures using high level data: A simulation analysis. *Meditari Accountancy Research*, 2021, 29(6), 1425-1450. <https://doi.org/10.1108/MEDAR-06-2020-0920>
- [20] Dameri, R. P.; Garelli, R.; & Resta, M. Neural networks in accounting: clustering firm performance using financial reporting data. *Journal of Information Systems*, 2020, 34(2), 149-166. <https://doi.org/10.2308/isys-18-002>
- [21] Kirpitsas, I. K.; & Pachidis, T. P. Evolution towards hybrid software development methods and information systems audit challenges. *Software*, 2022, 1(3), 316-363. <https://doi.org/10.3390/software1030015>
- [22] Estran, R.; Souchaud, A.; & Abitbol, D. Using a genetic algorithm to optimise an expert credit rating model. *Expert Systems with Applications*, 2022, 203. <https://doi.org/10.1016/j.eswa.2022.117506>
- [23] Zemánková, A. Artificial Intelligence and Blockchain in Audit and Accounting: A Literature Review. *WSEAS Transactions on Business and Economics*, 2019, 16, 568-581. <https://www.wseas.org/multimedia/journals/economics/2019/b245107-089.pdf>
- [24] Potwora, M.; Vdovichen, O.; Semchuk, D. The use of artificial intelligence in marketing strategies: Automation, personalisation and forecasting. *Journal of Management World*, 2024, 2024(2), 41-49. <https://doi.org/10.53935/jomw.v2024i2.275>
- [25] Qatawneh, A. M. The role of artificial intelligence in auditing and fraud detection in accounting information systems: moderating role of natural language processing. *International Journal of Organisational Analysis*, 2024. <https://doi.org/10.1108/IJOA-03-2024-4389>
- [26] Kussainov, K.; Goncharuk, N.; Prokopenko, L.; Pershko, L.; Vyshnivska, B.; & Akimov, O. Anti-corruption management mechanisms and the construction of a security landscape in the financial sector of the EUFeconomic system against the background of challenges to European integration: Implications for artificial intelligence technologies. *Economic Affairs*, 2023, 68(1), 509-521. <https://doi.org/10.46852/0424-2513.1.2023.20>
- [27] Centobelli, P.; Cerchione, R.; Del Vecchio, P.; Oropallo, E.; & Secundo, G. Blockchain technology design in accounting: Game changer to tackle fraud or technological fairy tale? *Accounting, Auditing & Accountability Journal*, 2022, 35(7), 1566-1597. <https://doi.org/10.1108/AAAJ-10-2020-4994>
- [28] Haapamäki, E.; & Sihvonen, J. Cybersecurity in accounting research. In O. M. Lehner & C. Knoll (Eds.), *Artificial Intelligence in Accounting* (pp. 182-214). Routledge, 2022. <https://doi.org/10.4324/9781003198123>