



A Study of the Impact of AI on Auditing

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Abstract: As the market environment becomes increasingly complex, the stringency of external regulation has also increased, making the audit workload show a rising trend. Under such a background, how to effectively break through the audit intensity, audit risk control and audit efficiency enhancement and other aspects of the difficult problem, has become the audit industry urgently need to solve the core issues. the emergence of AI technology for this field has brought revolutionary changes. AI can not only greatly shorten the time of the data collection, but also can effectively reduce the simple and repetitive manual labor. This thesis aims to deeply explore the far-reaching impact of AI technology on auditing, analyze in detail the application scenarios of AI in the auditing field, and explore its potential impact on the role of auditors as well as their future career development.

Keywords: artificial intelligence, auditing, data analysis, audit efficiency

1. Introduction

AI is a technology that simulates human intelligence through computer systems that mimic human learning, reasoning, problem solving, and other abilities in order to achieve automated task execution and intelligent decision making. AI technologies include machine learning, deep learning, natural language processing, computer vision, etc. [1]

Auditing is the process of independent, objective and comprehensive examination and evaluation of the financial situation, business operations and accounting records of an organization, institution or individual. Its purpose is to ensure the truthfulness and accuracy of financial statements, protect the interests of investors and maintain market order. Traditional auditing usually includes risk assessment, program design, evidence collection, and report issuance.

2. Application of AI in auditing

2.1 Automating the audit process

AI technology can play a huge potential in the auditing process, especially those repetitive and tedious tasks such as data collection, cleaning and analysis. By automating these processes, not only can the efficiency of auditing be greatly improved, but the occurrence of human error can also be significantly reduced. In addition, the freed-up auditor time will allow them to focus on more complex and high-value tasks, further enhancing the overall quality and effectiveness of the audit process. Such an application not only optimizes the auditing process, but also provides strong support for the sustainable development of the enterprise and risk prevention and control. [2]

2.2 Risk assessment and prediction

With the incorporation of AI technology, the task of auditors has been greatly simplified. This technology not only enables them to comprehensively and deeply assess the risks of an organization, but also pinpoints those latent risk factors through data mining. What's more, with cutting-edge predictive modeling, AI is able to accurately predict future risk events, thus providing solid technical support for risk prevention and control. These changes not only enhance the efficiency and accuracy of auditing, but also lay a solid foundation for the sustained and sound development of enterprises. [3]

2.3 Data analysis and report generation

With the in-depth use of data analysis technology, artificial intelligence can conduct comprehensive and in-depth mining of audit data to generate detailed and accurate reports. This process not only helps auditors to comprehensively and accurately grasp the actual situation of the audit object, but also provides them with clear and reliable information support. In this way, auditors can optimize the audit process more effectively, improve work efficiency, and ensure the smooth progress of the audit work. [4]

3. Impact of AI on auditing

3.1 Improving audit efficiency

AI technology can automate routine tasks, such as data analysis, text processing and report generation, which greatly improves the efficiency of auditing work. Traditional auditing work requires a lot of manpower, material resources and time, especially the item-by-item verification of an enterprise's financial statements, which is very cumbersome. The application of AI technology, on the other hand, can greatly improve the efficiency of auditing. For example, AI can accelerate the auditing process by quickly identifying and screening out key data through automated tools and reducing manual intervention. In addition, AI can also analyze and predict data through machine learning technology, helping auditors to better identify potential problems and risks, and reducing the possibility of omissions and false positives.

3.2 Enhanced audit accuracy

By applying the powerful capabilities of data mining and machine learning technologies, we are able to achieve a more comprehensive and objective analysis of financial data, thereby accurately identifying potential anomalies and risks. The application of this technology not only greatly improves the accuracy and reliability of the audit, but also ensures the efficiency and quality of the audit work. This innovative approach not only allows us to gain a deeper understanding of the financial situation, but also to identify potential problems in a timely manner, providing a strong guarantee for the sound development of the enterprise.

3.3 Changing the role of auditors

In traditional auditing work, auditors often need to invest a lot of time and energy in manual work, such as reviewing a large number of paper documents, organizing data, and conducting analyses. This approach is inefficient, prone to errors, and unable to meet the rapidly evolving business needs. With the continuous progress of AI technology, modern auditing work has undergone a radical change.

The introduction of AI technology has gradually shifted the focus of auditors from manual work to the role of supervisors and decision makers. They need to have the ability to analyze data and apply technology in order to better utilize AI assistants for auditing work. In this process, auditors need to acquire certain technical knowledge, such as programming, data mining, machine learning, etc., in order to analyze and judge the audit results generated by AI assistants.

4. Challenges and risks posed by AI

4.1 Data quality and accuracy

AI's algorithms have high requirements for data quality and accuracy, as they are the basis for building accurate models and analyzing results. However, in practical applications, enterprises often have many problems with their data, such as missing data, errors or inconsistencies. These problems not only affect the performance and accuracy of AI algorithms, but also may lead to distorted analysis results, which can mislead the decision-making process of enterprises.

4.2 Difficulty in defining responsibility for work

There are two key elements that need to be balanced when utilizing AI technology in the auditing field. First, the technological advantages of AI need to be fully utilized; second, auditors need to remain in the driver's seat in key decision-making processes. However, there may be a potential conflict between the two in terms of knowledge and values. Audit platforms with AI technicians focus primarily on technical considerations. The primary goal they pursue is to improve audit efficiency, rather than focusing excessively on the human element of auditing.

4.3 Technology and talent needs

The widespread use of AI technology cannot be achieved without the support of specialized technical talent that is responsible for developing, deploying, and maintaining advanced systems and models. Therefore, audit firms and enterprises must fully recognize this and may need to invest considerable resources to cultivate and attract these key technical talents. Only by doing so can they ensure the smooth application of AI technology in auditing and business operations, which in turn will drive the efficient operation and sustainable development of the overall business.

5. How the auditing industry is responding to the impact of AI

5.1 Technical training and talent introduction

First, increase the investment in internal training. Enterprises should incorporate AI and data science into their

training programs and regularly provide employees with relevant courses and learning resources. This includes training in basic theoretical knowledge, practical operational skills, and the latest industry developments. Second, expand external cooperation and communication. Enterprises can cooperate with universities, research institutions and industry associations to train professionals. This approach not only helps to apply the latest research results of the academic community in the actual business, but also for the enterprise to deliver a large number of excellent talents with practical experience. Finally, the introduction of external professionals. Enterprises should pay close attention to industry trends, and actively introduce external talents with rich experience and deep professionalism. They can bring new ideas and methods to enhance the overall innovation ability.

5.2 Formulation of technical norms and standards

Audit institutions have the professional ability to formulate AI technology-related norms and standards, which are designed to achieve standardized management of AI technology applications and ensure that they are comprehensively safeguarded in a lawful, compliant and secure environment. Through the careful planning and formulation of audit institutions, these norms and standards provide a clear direction for the development of AI technology, which in turn promotes its wide application in various industries, thus creating greater value for society.

5.3 Strengthening data governance and security

We must strengthen our data governance and management to ensure the quality, accuracy and security of data. This not only involves the protection of customers' privacy, but is also closely related to the security of an organization's trade secrets. In this process, we should utilize cutting-edge data management technologies and methods to build a robust data governance system to provide strong data support for the sustainable development of the enterprise. At the same time, we also need to continuously improve our knowledge and understanding of data governance to adapt to the changing market demand and technological environment, and lay a solid foundation for the long-term development of the enterprise.

6. Conclusions and outlook

The application of AI technology in auditing has brought great changes and opportunities to auditing work, improved audit efficiency and accuracy, and changed the role and work style of auditors. However, the application of AI technology also faces some challenges, which require the joint efforts of auditing organizations and auditors to strengthen the application and management of technology, promote the benign interaction between AI and auditing, and push the auditing work to a higher level. In the future, with the continuous development and improvement of AI technology, auditing will usher in a brighter future.

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