Applications, Issues and Challenges of ChatGPT in the Auditing Field

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Abstract: ChatGPT, as an emerging product of natural language processing, brings opportunities as well as certain challenges to the auditing industry as well as related practitioners. ChatGPT has processing advantages in the areas of assisted writing and editing, automatic summarisation and categorisation, which can promote the development of auditing to a certain extent. However, ChatGPT itself also has certain defects, which put forward new requirements on the ability of auditing practitioners. This paper analyses how ChatGPT can be applied to auditing, which includes both structured data processing and unstructured data processing, and explains in detail the problems that exist in the application of ChatGPT in these two areas, and finally points out the challenges that the emergence of the model poses to the auditing industry as well as to auditing practitioners, and puts forward a number of suggestions to deal with them.

Keywords: Auditing; ChatGPT; Data analysis

1. Introduction

Since the release of ChatGPT at the end of November 2022, it has had a new impact on various industries, and ChatGPT is of great significance in facilitating auditing digitisation. As an emerging product in natural language processing, ChatGPT has processing advantages in areas such as assisted writing and editing, automatic summarisation and classification, and to a certain extent, it is able to promote the development of auditing. However, ChatGPT itself also has certain defects, which puts forward new requirements on the ability of audit practitioners.

2. The application of ChatGPT in auditing and the existing problems

As a tool to assist auditors in auditing, ChatGPT can play an important role in promoting audit quality, audit efficiency and other aspects. In the era of intelligence, making full use of new technology is a problem that should be paid attention to [1], the following mainly introduces the application of ChatGPT in auditing, which is divided into structured data processing methods and unstructured data processing methods.

2.1 Application and problems of ChatGPT on structured data

The application of ChatGPT in structured data can be divided into the application in data analysis and the application in data mining.

In data analysis, before the auditor analyses the data, he usually needs to screen the data related to the audited unit to ensure its quality and accuracy; ChatGPT can provide suggestions on how to screen the data based on the questions inputted by the auditor and the characteristics of the dataset; in response to the screened data, the auditor can provide his own demands to ChatGPT, which in turn allows the auditor to do something such as generating data for the auditor. ChatGPT to do some data analysis work such as generating charts. Meanwhile, data analysis involves a variety of tools and technologies, including Python, SQL, etc., and ChatGPT can help auditors choose the appropriate data analysis tools and technologies to assist auditors in data analysis. After data analysis, auditors can make use of ChatGPT's strong summarisation ability to explain the data analysis results, helping auditors and auditees to better understand the data, and ChatGPT can provide relevant cases and suggestions based on auditor's problems and needs, so as to help auditors better apply data analysis.

In terms of data mining, ChatGPT, as a powerful natural language processing model, can be trained and learnt from a large number of audit datasets to improve its own understanding and analysis of relevant audit cases, thus assisting auditors in data mining of the audited unit's financial status, anomaly detection and correlation analysis, etc., and discovering the audited unit's hidden financial problems. Auditors can also use data mining to classify, regress and predict the massive audit data, and predict what may happen in the future. Auditors can use

ChatGPT to transform data mining results into easy-to-understand and analyse charts and reports to help auditors better understand the results of data mining and discover patterns and regularities hidden in audit data. In auditing work, data mining technology can reduce a lot of time consuming repetitive operations or complex calculations, and assist auditors in risk assessment.

Although ChatGPT is a powerful artificial intelligence that can assist auditors to complete data analysis, data mining and other related tasks, it is not perfect, and there are some problems and obstacles in its use in the audit field. At present, the biggest defect that exists in ChatGPT is that the answers generated for the questions may have quality hazards and may give inaccurate or even incorrect answers. This is a problem with the ChatGPT model itself, which needs to be further improved at the algorithmic level to meet the auditor's requirements for data analysis accuracy.

2.2 Application and problems of ChatGPT in unstructured data

On the unstructured side, ChatGPT's intelligent Q&A technology can be used to answer auditors' questions and help them quickly find potential information and solve problems. For example, if you ask ChatGPT questions related to auditing policies or laws and regulations, ChatGPT can automatically match the most suitable auditing policies or laws and regulations according to the auditing questions to facilitate auditing consulting, thus reducing the time consumed in querying the policies. ChatGPT can also interact with the auditees through the intelligent dialogue technology, to understand the auditee's business as well as the financial status, so as to better identify potential risk points and solve problems. ChatGPT can also integrate and analyse unstructured data such as text in audit consultations, semantically analyse text such as financial statements, accounting documents, audit reports, etc., extract themes, keywords and risk points, and automate the processing of the text in combination with RPA (Robotic Process Automation), thus assisting auditors to make decisions. automated processing, thus assisting auditors to make more accurate decisions.

However, ChatGPT also has problems when applied to unstructured data. When answering questions, the answers are usually too long and overuse certain words; for ambiguous questions, the model usually guesses the user's intention instead of letting the user clarify the question; and since the training data of ChatGPT mainly comes from a large amount of text on the Internet, it is not sufficiently in-depth in the auditing and other related professional fields. ChatGPT understands the same accounting policy, but the actual application of accounting policy varies a lot. ChatGPT's understanding of accounting policies is the same, while the actual application of accounting policies varies a lot, and the selection and application of accounting policies vary a lot from region to region and from industry to industry, which challenges ChatGPT to understand the business scenarios and give the judgement in line with the actual business scenarios.

In order to cope with the occurrence of such problems, we can adopt more audit-related data for corresponding training to build a ChatGPT in the auditing domain and reduce the occurrence of inaccurate audit information. When ChatGPT gives wrong or inaccurate answers, the auditor can correct the answers given by ChatGPT through Q&A, so as to give higher quality answers.

3. Challenges of ChatGPT for Auditors and the Auditing Industry

With the rapid development of artificial intelligence, jobs requiring mechanical repetitive labour in all industries are replaced by artificial intelligence,, and the emergence of ChatGPT may replace the careers of traditional brain workers, and auditors engaged in repetitive labour work in the auditing industry face the risk of being replaced. And since ChatGPT itself is more trained by a large number of texts to integrate and re-generate existing knowledge, it is difficult for complex and creative high-end auditing operations to be completely replaced. Some research results show that financial auditors with more working experience can better imitate the cognitive schema of ChatGPT compared to those with less working experience[1]. This puts forward new requirements for auditors, auditors need to strengthen their comprehensive quality, on the one hand, to strengthen the learning of this professional knowledge, on the other hand, to strengthen the learning and data analysis, data mining and natural language processing and other computer expertise, on this basis can use ChatGPT to assist auditors to carry out a comprehensive analysis of the formation of judgement, so that in the elimination of the traditional AI The wave of the profession to maintain their professional competitiveness, some research results show that the auditor with an AI educational background is significantly negatively correlated with the audit report lag, and the auditor with an AI educational background can shorten the time of the annual audit report by using programming, application technology and logical thinking skills, thus improving the timeliness of the audit report[2]. On the

other hand, ChatGPT has had some impact on the auditing industry, and given the significant impact of machine learning, accounting firms should consider integrating machine learning technology into their auditing practices[3]. In March 2016, Deloitte Consulting introduced machine learning into accounting, auditing, and other workflows, and then some scholars have proposed to invoke ChatGPT into the RPA technology on the basis of this reconstructing the bank-enterprise reconciliation process to strengthen the internal control of enterprises. All major firms should apply the model to their daily auditing work under the impact of ChatGPT, which requires firms to strengthen the construction of artificial intelligence and other related organisations.

4. Conclusion

The emergence of ChatGPT has brought opportunities and challenges to the auditing industry and audit practitioners, although ChatGPT is currently used in the audit there are still many problems, but these problems are not insurmountable, the rapid development of artificial intelligence technology will be ChatGPT existing loopholes for the correction; auditors, although faced with the risk of losing their jobs, as long as they strengthen their professional knowledge of auditing and computer-related professional knowledge will not be easily eliminated by ChatGPT, so overall ChatGPT's impact on the audit of more benefits than disadvantages should be supported. Although auditors face the risk of losing their jobs, as long as they strengthen their professional knowledge of auditing and computer-related expertise, they will not be easily eliminated by ChatGPT. Therefore, in general, the impact of ChatGPT on auditing is more beneficial than detrimental, and it should be supported for the use and development of ChatGPT in auditing. Currently, the use of ChatGPT in auditing is only at the level of theoretical analyses, and it has not been applied to internal auditing, government auditing and social auditing, so there is still a long way to go for the large-scale application of ChatGPT in auditing.

References

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