Research on Data Management Method Based on Big Data and Artificial Intelligence

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Abstract: The research and development of artificial intelligence is a high-level achievement of science and technology today, and the development of big data technology closely related to it is also quite rapid, and it is gradually applied to people's work, life and social development. At present, the main trend of different fields and the future development of society is information management, and the field of information management of enterprises is covered by artificial intelligence technology and big data technology. Through the management needs and development direction of different fields and society, this paper uses big data technology and artificial intelligence technology to establish data management systems in various fields, which promotes better development prospects and sharing of data resources in these fields.

1. Introduction

With the continuous innovation of information technology, more and more fields are currently using big data and artificial intelligence technology for data management, and more and more industries are applying big data and artificial intelligence technology to invest in production. Therefore, it can be found that the data management method using big data and artificial intelligence will be the development trend of the future industry. The development of artificial intelligence is inseparable from the knowledge of various disciplines such as psychology, informatics and mathematics. It summarizes and summarizes the laws of various activities in human society, further analyzes and predicts and understands what may happen and rules. Big data is able to guarantee the transformation of data in artificial intelligence and the adjustment of knowledge structure, and promote the perfection of data management.

2. Overview of big data and artificial intelligence

2.1 Overview of big data definition

Big data itself has a fairly large data set and is dependent on data volume and data categories. Current traditional database tools are not yet available for processing and processing. In general, big data has the following characteristics: large data size, true reliability, multiple types, and fast processing speed. First of all, the data source of big data can basically originate from various data sources. There are quite a lot of sources of these data sources. Therefore, the format and type of data are not only rich under the influence of time; secondly, the scale of the data is quite large. In terms of 10TB; the other is that the true reliability of data is guaranteed. The rise of some data sources will break the situation that most of the past big data is traditional information sources; these are urgently needed in various industries. The data source of authenticity and reliability must also ensure the relative security of these information sources; finally, the data processing speed is quite fast, and the data can be processed in the shortest time.

2.2 Overview of artificial intelligence definition

The emergence of artificial intelligence has successfully re-engineered the industry and the development of various fields. It is a new type of technology and science, mainly based on the

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function of simulating human beings, and has developed various machines that can use human intelligence, theory and technology to further close or approach human thinking. . The emergence and development of artificial intelligence is closely related to the development of science and technology, and will continue to play its role in future development.

2.3 The relationship between big data and artificial intelligence

There is a cross between the research field and knowledge of big data technology and artificial intelligence, and the two technologies mutually promote each other, which further creates new value, application and method for data management. At present, humans further classify, count, count, and access new technologies that are large, fast-flowing, and large in size. This has benefited from the development of big data, and the research in the field of artificial intelligence has also been applied to the field of big data, and has achieved remarkable achievements. The growth of artificial intelligence and the resolution of extended problems require the participation of big data. In the past, artificial intelligence technology has not yet developed and cannot have similar learning and research capabilities. The reason for this is that the development of artificial intelligence seems to be relatively easy, but in fact the construction of the entire research system and research knowledge is quite complicated, and the generation of artificial intelligence must have quite large data and a relatively high processing of data. ability. Artificial intelligence is similar to humans to some extent. It is the drama and processing of knowledge and experience. The acquisition and processing of these knowledge requires a large amount of data to support. The successful development of big data provides technical support for the development of artificial intelligence. It enables the machine to have the ability and method of processing data, and further matches the way humans handle data. Finally, artificial intelligence develops under such conditions and backgrounds. And promote the forward progress of big data technology. The relationship between artificial intelligence and big data

The system is definitely not a relationship of mutual dependence, but an individual who is independent of each other and promotes both sides.

3. The impact and trend of data management brought by big data and artificial intelligence

Under the premise that information technology continues to penetrate into all aspects of human beings, big data and artificial intelligence technologies continue to merge and penetrate. And it has had a considerable impact on this premise. It has become an important driving force for data management in all walks of life. In terms of data management, the process and micro aspects are paid more attention and attention, and the management of big data is unstructured, microscopic, procedural and dynamic. Further integration of data in different data streams, and the emergence of problems and laws in various industries.

At present, according to the development rules of various industries, the current development trend of data management is mainly the following aspects: First, the data is an important basis for decision-making. The use of big data can roughly end the law of the forward development of things, and in the process of management, by using the information displayed by various data, the future development trend of data management can be predicted. It also promotes the transformation of the current situation of decision-making from all walks of life into the basis of decision-making by data, further improving the scientific nature of decision-making and improving the practicality of data management. In addition, it is able to fully utilize the advantages of artificial intelligence technology, monitor and detect the phenomena and construction processes in various industries, and analyze them to construct a new data management method.

4. The problem of data management based on big data and artificial intelligence

4.1 Information security issues

Data management must be built on real data so that data can be used to predict future developments and make decisions. Through the use of big data and artificial intelligence technology, the reality can be exposed in the form of data. In the process, it is necessary to ensure that the data is in line with the actual situation. The current development of big data and artificial intelligence has led to the emergence and development of artificial intelligence robots and intelligent manufacturing. The matching equipment has emerged and applied to various life fields of human beings. The input of personal information or the circulation of information may cause leakage of information. Even in some industries, illegal enterprises or individuals use illegal means to obtain such data in order to obtain benefits, resulting in insufficient information security. The reason for this is that the popularity of artificial intelligence technology and big data technology has eliminated the past data processing system and can solve the problems that the system could not handle in the past, but big data and artificial intelligence itself have certain openness, in practice. In the process of application, there may be potential risks and viruses invading it, and it is difficult to find out, which ultimately leads to the loss of information and data under malicious attacks.

4.2 Threats caused by information exchange and sharing

The use of big data and artificial intelligence realizes the sharing and exchange of various information data, which leads to the partial openness and transparency of such information. Such a situation will inevitably bring about a lot of threats and hidden dangers. Big data and artificial intelligence have to process and store quite a lot of information, and in this context, it is easy to generate data garbage and redundancy, and some potential dangers may appear in some spam. In the process of data management, it is easy to cause information leakage. Therefore, in the process of data management, the boundary between ethics and law should be clarified. The management and analysis of data must be carried out under the premise of clear rules and personal consent. The security features of the data cannot be spread out, and ultimately the security of the data related to individuals and units will be guaranteed.

5. Data management method based on big data and artificial intelligence

5.1 Make full use of relevant databases

Big data itself has a lot of data management technology, which can improve data processing and improve efficiency with artificial intelligence. Manage data by using a relational database, noSQL database, and artificial intelligence. First, relational databases primarily use real-life things to express language, optimizers, and mature products that are fairly easy to understand. The noSQL database for data management mainly has the following aspects: operation type and analysis type. Using these databases can enhance the logical relationship in data management and determine whether the logical relationships are correct. In most Internet applications, the isolation and consistency of data management is reduced under the management of such database technology and artificial intelligence technology, and finally the data is protected and managed.

5.2 Strengthen the management of master data

Current artificial intelligence effectively helps companies achieve an understanding of “golden data”. In general, master data has its own record system, and this system is dedicated and decentralized. Artificial intelligence can timely select the data with high frequency and continuous flow, and then determine the reliable source of the main data. In addition, the main problem faced by master data management is to be able to merge and match the same data in multiple systems. This requires the establishment of data matching rules. The rules contain different matching degrees of acceptance. Through different matching of trust degrees, data values can be guaranteed to be

accurately implemented.

5.3 Management of data quality

Data management must also ensure that the data in it has a high quality, which is the basis for future data to be applied. The measure of data management quality is whether the data is complete, whether the data is stored according to rules, whether the relevant values of the data conflict with the actual information, whether the data is duplicated, and the timeliness of the data. The quality of data management can rely on artificial intelligence to extract its evaluation dimension so that the problem can be solved at the source of the data. However, in general, there are factors that are difficult to implement: First, the data source is quite large. And its quality is difficult to control, and secondly, the cost is too high, and it does not allow companies to pay such high costs. Therefore, it is necessary to improve the quality of the data stream existing on the service line on the basis of business expectations. In addition, it is necessary to regularly supervise the data cleaning and the evaluation of the effect of data quality, strengthen the depth, and according to business expectations. And the content of data management is constantly changing, and finally the dynamic development of book data quality management is realized.

5.4 Data security management

The first is to use artificial intelligence technology and big data to obtain relevant data in a timely manner, and to clear, mine, and learn the data, and accelerate the establishment of a data security system and mechanism. In addition, the data should be classified and graded, and some important documents should be kept confidential and managed by the engine, and data leakage, intelligence analysis and anti-fraud can be effectively controlled.

5.5 Practical application methods for data management in all walks of life

The current audiences in enterprise data management are mainly employees and managers. From work to work, to employment and separation, it is a dynamic management process, while data management for enterprises provides a broader data for big data and artificial intelligence. The scope and scope. For example, the basic information of the company's current employees, employees and managers can be understood in the first time, and the source, ability and adaptability of the company can be known, and the best personnel distribution and labor distribution plan can be proposed to solve the past. Data management only integrates the limitations of some people's attention, integrates the comprehensive capabilities of employees and future development, and guarantees the best labor distribution plan.

In addition, data management can be used to understand the performance of corporate employees. In the past, most companies did not have the intervention of big data and artificial intelligence. They did not have a fine grasp of the employees' own performance, and it is easy for some employees to fish in troubled waters. After the discovery, they often bring considerable losses. Therefore, it is quite necessary to supervise employees through data management. First, through the big data technology and artificial intelligence technology to collect the performance of the company's employees, and based on this, the performance of different employees will be evaluated, and through data management to predict the future performance of employees, and ultimately remind and encourage employees to perform.

References

[1] Promote the integration of Internet big data artificial intelligence and manufacturing industry [N]. The People's Political Consultative Conference, 2019-06-19 (003).

[2] Luo Wei, Zhou Hui. Research on the Prospect of Artificial Intelligence in China under the Background of Big Data[J/OL]. China Science and Technology Information, 2019(12): 113-114[2019-06-23]

[3] Liu Xianlin. High-tech for surveying and mapping services for social progress [J]. Surveying and Mapping Science, 2019, 44 (06): 1-15.

[4] Zhou Wei. University information service based on big data and artificial intelligence [J]. Think tank era, 2019 (25): 255 + 257.

[5] Yan Mingxiang. Application of Artificial Intelligence in Computer Network Technology in the Age of Big Data[J]. Electronic Technology and Software Engineering, 2019(11): 244.

[6] Wang Xiaoxia. Application of Artificial Intelligence in Computer Network Technology in Big Data Era[J]. Computer Products and Circulation, 2019(06):42.

[7] Li Yuling. Preliminary Study on the Fusion Development of Artificial Intelligence, Big Data and Cloud Computing[J]. Computer Programming Skills and Maintenance, 2019(05): 106-107+128.

[8] Fan Lili. Research on Artificial Intelligence Technology Based on Operator Big Data[J]. Telecommunications Engineering Technology and Standardization, 2019, 32(05): 7-10.

[9] Dong Wei. Application of Artificial Intelligence in Computer Network Technology in Big Data Era[J].Network security technology and application,2019(05):52-53.