Research on Application of Artificial Intelligence in Computer Network Technology under the Background of Big Data

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Abstract. Computer network technology has become a widely used modern technology in the development of modern society, and it has a very good role in promoting the development of many industries and fields in the society. Therefore, the better application and development of computer network technology gradually very necessary. In the context of the current big data era, more and more modern technological methods can be integrated in the development of computer network technology, and artificial intelligence is a relatively common one, playing an irreplaceable role in improving the level of computer network technology. Function and value, therefore, the application of artificial intelligence needs to be reasonably grasped.

1. Introduction
Artificial intelligence is a modern advanced method developed on the basis of intelligent technology, and it is widely used in various fields to connect with each other, showing a higher application value [1]. Taking advantage of the continuous development in the era of big data, the application of artificial intelligence in computer network technology is also becoming more and more important. It has effectively promoted the level of computer network technology and the further development of computer network technology. Based on this, this paper analyzes the application of artificial intelligence in computer network technology in the era of big data, in order to achieve a more ideal application of artificial intelligence and achieve better development of computer network technology.

2. Overview of Big Data Technology and Artificial Intelligence

2.1. Overview of Big Data Technology
The so-called big data refers to the storage and analysis of a large amount of data information in and out, through the analysis of these data to obtain relevant calculation results that meet people's actual needs. As far as the actual application of big data technology is concerned, it shows obvious data type size characteristics in actual applications [2]. The realization of big data is based on a combination of different data information and can be obtained by various data information application requirements. Satisfy. At the same time, the realization of big data technology can still achieve further enhancement of data quantity and depth, which means that big data technology can be transformed into data scale expansion, and the data information capacity is relatively high, which can achieve more ideal data information storage and processing. In addition, referring to other forms of data processing, big data technology has more ideal reliability in processing data, and has a higher level and ability in data processing and data transmission. It is not easy to be affected by the outside world during data processing. Factors influence. Volume, big data technology has high-performance capabilities in the processing of
data and information, in the actual application process through the use of statistical analysis methods, according to different fields and related daily behavior within the industry, various data information is collected, here On the basis, the optimization of the data structure can be realized, so that the data information can be better applied [3].

2.2. **Overview of artificial intelligence**
In the autonomous management of information data, relevant information can be satisfied and data processing can achieve better results. In the processing of existing data and information, the use of artificial intelligence can effectively avoid the occurrence of various problems, ensure that the value of computer technology can be fully utilized, and can effectively improve the efficiency of data processing, and the application of computer network technology It can provide ideal support and guarantee, and gradually realize the ideal development of computer network technology to meet actual needs.

3. **Application advantages of artificial intelligence in computer network technology**

3.1. **The application of artificial intelligence is conducive to the stability of network operation**
With the continuous development of existing computer network technology, computer network technology has been widely used in people's daily life and work. Computing network technology has a greater and greater impact on the development of modern society, and thus in the application of computer network technology It is necessary to ensure its running stability. In the practical application of the existing computer network technology, the rational application of artificial intelligence can make the computer network operation more intelligent and scientific, which can effectively avoid the unsafe conditions in the computer network operation, which can make The stability of the computer network operation is ideally guaranteed, providing an effective foundation and support for the better application of computer network technology.

3.2. **The application of artificial intelligence is conducive to computer network management**
In the context of the rapid development of existing computer network technologies, the computer network structure is becoming more and more complicated and cumbersome, and at the same time, there are more and more computer viruses, so it is necessary to effectively manage the computer network. In the existing computer network management, through the application of artificial intelligence, the computer network can be divided and managed separately. On this basis, the computer information network can be converted to restore the technology, and at the same time, it can be good with different departments. On the basis of this coordination and communication, the computer network can play a better role. Therefore, the application of artificial intelligence has important significance and value in computer network management.

3.3. **The application of artificial intelligence is conducive to the improvement of reasoning ability**

Figure 1. The specific application of artificial intelligence in computer network technology
In the existing computer network, the application of artificial intelligence can realize the intelligent analysis of relevant data information and make the data analysis judgment more reliable through various thinking judgment methods. At the same time, the application of artificial intelligence can achieve the depth of relevant data information. In addition, the application of artificial intelligence technology can also achieve non-linear network behavior, and on this basis, it can effectively solve technical problems. In the context of the current big data era, by applying intelligent technologies in computer networks, many practical problems can be effectively solved, so that the search capabilities possessed by the network itself can be effectively improved, and the speed of computer network operation can also be achieved effectively. Promotion, so that the computer network can have higher security and favorable conditions in actual development and achieve a more ideal development of the computer network.

4. The specific application of artificial intelligence in computer network technology

Due to the obvious application advantages of artificial intelligence in computer networks, artificial methods are also required to be reasonably applied in all aspects of computer network applications. As far as the actual application of artificial intelligence technology in computer networks is concerned, it mainly reflects in the following aspects.

4.1. Application of artificial intelligence in the internal detection of computer networks

In the existing computer network application and management, detection technology has a very wide range of applications. This technology refers mainly to computer intrusion detection technology. Only after the intrusion detection technology is guaranteed can the computer network security management be obtained. The earlier good effect enables the intelligent firewall to be constructed, which effectively improves the security level of the computer network, keeps the related resources in the computer system consistent, and can realize the confidential management of the related resources in the computer to ensure that various data resources can be better applied. In the aspect of intrusion detection, through the use of artificial intelligence technology, effective processing and analysis of network data information can be achieved, and reasonable classification of network data can be achieved. Through this process, some suspicious data existing in the computer network can be effectively achieved Filtering, and users can also obtain detailed inspection reports, so that data security can be better guaranteed. In addition, through the reasonable application of artificial intelligence in the detection technology, the network can be monitored in real time for better implementation, effective detection of the actual operating state of the computer network, effective protection of the computer network, and effective protection against computer attacks, Can also effectively prevent the occurrence of operational errors, so that the computer network to achieve a more ideal application and development.

4.2. Application of artificial intelligence in network security management

In the current development of computer networks, security has always been a very important issue, and it is also a problem that most users are concerned about. The current most important and most common security issue is a large number of network individuals, so it is necessary to use technology In the existing computer network management process, through the effective application of artificial intelligence technology, to transform and gradually realize, continuously improve network security monitoring capabilities, so that network security can be better guaranteed. The degree of improvement in network security can be self-diagnosed through the computer, and the existing security problems can be grasped in time, and these security problems can be better dealt with. In the process of implementing data input, artificial intelligence can automatically read the relevant data entered, and can effectively collect these data, can be found in time for abnormal conditions in the network information, and can effectively repair network faults, so that The computer can run quickly, so that the computer security system can develop better, and ensure the user's safety is fully guaranteed.

4.3. Application of artificial intelligence in network expert system
In the context of the development of the modern society in the era of big data, the computer network management also shows the characteristics of intelligent development. These artificial intelligence applications have become an inevitable demand, and the application of artificial intelligence can be realized using expert system functions. During the continuous development of the computer network, the computer network has not only changed, but in terms of function, it refers to the effective application of the relevant expert knowledge base in the computer network, and the use of transformation technology to realize the realization of a comprehensive management system. In the composition of modern artificial intelligence systems, the expert system is an important part. The application of this system can collect the knowledge and relevant experience provided by relevant experts and scholars in the system. On the basis of this, artificial intelligence technology is used to achieve these the information is processed again, and through the use of this information, the temperature problem existing in reality can be effectively solved, and the computer network can be saved for a more ideal application. [4]

4.4. Agent management of artificial intelligence

In the existing computer network, through the application of artificial intelligence technology, agent management can also be effectively achieved, and the essence of agent management technology belongs to the physical software. In the actual application process, the basis for the analysis and processing of data is mainly based on internal Knowledge base, on this basis, management tasks will be completed quickly. In the application process of artificial intelligence agent management technology, usually after the user completes the related work, the system can automatically search for data information, and the relevant data searched can be transmitted to a specific location, thereby providing users with intelligence service. For example, in the process of searching for related information, the user can process the data that the user is looking for through the application of artificial intelligence technology, and then analyze the data based on the information, on the basis of which the user needs the information Provided to users, so that users can save a lot of time when searching for information, so that the efficiency of information search can be effectively improved. As far as the actual situation is concerned, geographic management technology using artificial intelligence technology is committed to a very wide range of applications in all aspects of modern life and work. People shop online in daily life and work, send and receive emails, and plan trips. All aspects are applied using artificial intelligence agent management technology, so as to provide a convenient connection for people's lives and work, so that all aspects of work can be achieved with satisfactory results.[5]

5. Conclusion

As a modern scientific technology, computer network technology plays a very important role and value in the application of people's actual life and work. It is necessary to transform computer network technology to achieve better development. In the practical application and development of existing computer network technology, in order to obtain satisfactory results, more and more modern technology means are being integrated, and artificial intelligence technology is one of the more ideal ones. Therefore, relevant technical personnel need to fully grasp the application of artificial intelligence technology in the network on the computer, and on this basis, gradually promote the more ideal development of the computer network and artificial intelligence.

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