Research on the Relationship between Artificial Intelligence Technology and Computer Data Processing

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Abstract. In the information age, the application penetration of artificial intelligence in the field of computer data processing has become quite common. The fuzzy inference system and the neural network system in its composition system have good data analysis and reasoning capabilities, which has improved the quality of products produced. The enhanced function connection is one of the most important ways of artificial intelligence spatial expression. It achieves high-speed data operation under the premise of ensuring accuracy. The formed fuzzy inference system expresses information and data through rigorous and logical language. This article comprehensively analyzes and discusses the relationship between them.

Keywords: Artificial Intelligence, Computer, Data Processing

1. Introduction
The essence of artificial intelligence technology is to simulate human intelligence and develop mechanical tools that can replace human work and production. At this stage, artificial intelligence equipment mainly uses computers to achieve control purposes, which promotes the progress of human civilization and exerts human great ingenuity. With the application of modern artificial intelligence in many fields, traditional manual operation methods have gradually disappeared and the future has broad development prospects[1].

2. Overview of artificial intelligence technology
2.1. Problem solving
In the development of information age, artificial intelligence, as an important fulcrum of the development of information age, will suffer from certain difficulties in the development process. How
should artificial intelligence solve these problems? Are solutions to these problems really effective? This is a thought-provoking question[2]. In my opinion, the first step should be to refine these problems, gradually divide the problems faced by artificial intelligence technology and turn big problems into small problems. By solving these small problems, we will continue to accumulate problem-solving ideas and methods. Then effectively promote the solution of big problems.

2.2. Expert system
In the process of artificial intelligence technology and its application, the establishment of the expert system is indispensable. The establishment of expert system makes artificial intelligence technology develop further. At the same time, the establishment of an expert system motivates many problems to be effectively solved. It is equivalent to an information software, which plays an important role in querying information and querying the background. It also can be used for some unclear information and unclear background[3].

2.3. Machine learning
During the development of artificial intelligence technology, machine learning has played a key role. Machine learning can improve the simulation of artificial intelligence systems. In the process of the development of artificial intelligence technology, it is necessary to continuously learn about artificial intelligence machines[4]. Only in this way can the artificial intelligence technology be gradually improved. At the same time, when applying artificial intelligence technology to human research, it can be more accurate and it can find its own shortcomings and problems and then correct them. For example, in the process of the machine learning, artificial intelligence technology provides more possibilities for it. People no longer rely on traditional thinking methods for learning, which further broadens people's horizons and diverts people's thinking. The machine learning data storage structure is shown below.

![Figure 1. Data storage structure](image)

3. Computer data processing technology analysis

3.1. Storage technology
Data storage is the primary prerequisite for the operation of data information in network systems. Performance analysis of data information can be performed by means of classified storage and file storage can be performed in accordance with the format of data information. Some data information has a real-time function and has high storage performance requirements. It can be stored in a real-time
database to make it run at the highest speed[5]. At the same time, important data information can be stored in parallel and the data information can be backed up. When extracting important information, it can be read through multiple channels to improve the accuracy of data reading. It can store the accumulated data information in a decentralized file classification process, which allows repetitive retrieval of new data information, which can effectively improve the processing rate of data information.

3.2. Real-time processing technology
During the current processing of network data information, due to the increase in user demand and the diversity of detection data, the amount of network big data information storage has increased. When processing data information, due to the large amount of data, the processing time will also be extended. Some traditional data processing schemes are built on the basis of data information storage to ensure that data information can be processed at high speed within the processing scheme, but With the increase in the amount of data information, the classification has fallen short of the basic requirements for big data information processing.

3.3. Visual technology
When the current intelligent network information, how to provide data information to the user, so that the user can effectively view the data information has become a new challenge. The emergence of visual technology can collect large-scale information of intelligent network systems on a large scale and collect high-resolution, high-precision, variable collection and reading of data. Amount is TB level[6]. In the acquisition process, it becomes a technical difficulty to perform high data processing mode and convert accurate data information into pictures. The challenges are mainly photo synthesis algorithms and data information. The visual data processing structure is shown in the figure below.

![Figure 2. Visual data processing](image)

4. Analysis of computer data processing based on artificial intelligence

4.1. Artificial intelligence analysis and processing of network security data
At this stage, with the continuous development of the Internet, network resources are gradually showing open, virtual and shared characteristics. This has greatly increased the occurrence of network security issues, such as the leakage of personal privacy information and viruses. , Trojans, etc., this series of security risks will occur without notice. In this case, we take full advantage of artificial
intelligence to perform security management and maintenance of computer networks, which can ensure the security of computer network communications to a large extent and prevent personal privacy information from being leaked. For example, our current application of anti-spam systems and intrusion detection technology is very extensive. Not only can we detect if a message is infected with a Trojan horse in time, we can block it in time, but we can also effectively block some spam messages. Not only effectively reduce the probability of being invaded by viruses and Trojans and reduce the occurrence of cyber fraud, but also fully ensure the safe operation of the computer.

4.2. Artificial intelligence analysis and processing of system evaluation data
For the management of computer network technology, we also need to actively use artificial intelligence to carry out various tasks, organically integrate various types of knowledge stored in its knowledge base, experience of expert systems and its own identification and search functions. In addition, it gives artificial intelligence certain thinking and emotions to form a more intelligent network evaluation system. It reasonably analyzes a series of problems that occur in the operation, communication and information interaction of computer networks, effectively improving the efficiency and work of computer networks. quality.

4.3. Network security management data analysis
In the past, there are many factors in computer network management that are difficult to determine. The existing computer network management is difficult to cope with such dynamic changes. One of the characteristics of artificial intelligence technology is that it can find its internal relationship through the collection of large amounts of data and machine learning. Give your computer the ability to update and upgrade itself. For example, the expert system in artificial intelligence is the most obvious application technology. Use this system to collect, summarize and analyze some professional knowledge in related fields, import it, and store it in a computer. After processing and scientific calculation, the computer can quickly solve many complex problems. Through the use of expert systems in computer network management, the security and reliability of computer networks can be improved, management benefits can be maximized, the problems of low work efficiency and hidden security risks in network information processing can be solved and intelligence can become network management. Important factor.

4.4. Network attack defense data processing
The application of artificial intelligence technology to computer network systems has become relatively popular. For example, firewalls, virus intrusion detection and protection systems, etc., have applied artificial intelligence technology. It plays an important role in ensuring the security of the computer network system operation and the security of information and data in computers. Compared with the previous firewall system, the firewall system with artificial intelligence technology has made a great breakthrough in technology. Different from the traditional firewall method of querying users, the artificial intelligence system can intelligently memorize and analyze illegal data and viruses that are not conducive to user information management through information screening methods, directly process them and intercept them in real time. And access restrictions to avoid repeatedly asking users and unfamiliar with firewall knowledge and causing computer network system security problems.
Therefore, the application of artificial intelligence technology in the firewall system can reduce the amount of information measurement and processing and also prevent denial of service attacks and virus intrusions that have often occurred in system management in the past.

5. Conclusion
Based on the role of the network structure, the application of artificial intelligence in the field of computer data processing can also calculate infinitely close continuous functions and store information in its unique way, achieving more simple operation and control. However, in terms of objective dimensions, the development of artificial intelligence technology is not yet fully mature and the computing power of related data is weak, which limits its application space to a certain extent. At the same time, there are still some problems in artificial intelligence and related problems should be solved according to the actual situation. As long as the essence of the problem is grasped, we can be at ease in the process of solving artificial intelligence problems, thereby promoting the continuous development of artificial intelligence technology.

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