Analysis on the Application of Artificial Intelligence in Computer Network Technology

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Abstract: Nowadays, scientific and technological innovation continues to improve, to a certain extent, the level of information technology has been improved, and people pay more and more attention to computing performance. Faced with this situation, artificial intelligence technology has been promoted to provide high-quality services and highlight convenience in people's daily work and life. With the use of artificial intelligence, it has greatly satisfied people's different needs for computer intelligence and humanization, mainly involving many technologies in the field of biology, computer engineering, and mathematics.

Introduction

According to the current social development trend, China's science and technology has risen to a new height. In the past, old technology has been difficult to adapt to the current social development situation. Based on the perspective of modern industrial development, intelligent technology has gradually replaced traditional technology. High-tech intelligent products can be seen everywhere in people's daily life, not only in terms of people's lives, but also in accelerating the pace of social development. In addition, it can save resources and improve social and economic benefits.

1. Overview of artificial intelligence

1.1 Meaning

Artificial intelligence contains a variety of science and technology, which is a new type of technology. The fields involved are: computer subjects, physiology courses, language subjects, etc. Its effect is to incorporate artificial intelligence devices inside the machine to fully display its mobility. For more complex and low-safety tasks, it can be aided by artificial intelligence facilities, which can not only enhance work efficiency, but also ensure that employees' lives are not damaged. For artificial intelligence and natural intelligence, artificial intelligence is an innovative intelligent means that enables systems and machinery to choose artificial intelligence methods and give orders to workers. This technology touches a large number of subject areas, and the relationship between development, construction, and multi-disciplines is very close. Especially for computer science and technology progress, it highlights the guiding characteristics [1].

Artificial intelligence can not only effectively and comprehensively resolve fuzzy data, but also manipulate and control the situation presented by system data, track the dynamics of artificial intelligence in real time, and effectively harvest information while processing information. Writing efficiency is a key feature of artificial intelligence. It can integrate and deploy the collected information to achieve resource sharing, so that every user can view the data. Combined with the distributed artificial intelligence thinking and network management of multi-agent writing, it enhances Degree and efficiency of network management. In the field of networked intelligent processing, the role of artificial intelligence is relatively obvious, with strong learning skills and independent research [2]. Use artificial intelligence to implement network management, comprehensively improve the efficiency of information processing, highlight the fairness and accuracy of information processing, rely on its strong memory to store information, establish a

complete information management database, and treat the information management database as a platform, effectively Organize the data, research and analyze the data, show the accuracy of the advanced data, and further strengthen the quality of network management.

1.2 Features

Based on the vision of computer networks, artificial intelligence has developed rapidly and has been recognized. With the popularization and use of this technology, its technical advantages become more and more obvious. At the same time, it creates high-quality conditions for the stable operation of the network, and more supports network applications.

1.2.1. Blur processing

Fuzzy processing is one of the characteristics of artificial intelligence. Its role is to process relatively fuzzy data and delve into the network in detail with the help of fuzzy processing, thereby alleviating the restraint of fixed teaching models and completing similar operation steps to people. In the implementation stage of fuzzy processing, a new method is injected into the network management, and then fuzzy data is efficiently processed to achieve network span development.

1.2.2. Hierarchical

Hierarchical processing occupies a dominant position in artificial intelligence technology. In view of the fact that the network is composed of several layers, the choice of artificial intelligence processing methods is different. This allows the superior to manage the subordinates, and the subordinates can monitor the effectiveness of the superiors at any time. The superiors and subordinates cooperate with each other to establish a complete network system. The flexibility and efficacy of artificial intelligence is extremely strong, and it can allow persons in charge at different levels to complete a task together.

1.2.3. Learning

Learning is the most obvious type of artificial intelligence technology. This technology can process information by itself, find difficult words in the middle, delve into such words carefully and deeply, and get the correct implication of instructions, better supervision and manipulation the internet.

1.2.4. Economical

The scientific use of artificial intelligence technology can save money to the greatest extent, better analyze and discuss information resources, efficiently solve internal problems, and enable users to harvest information data in the network in a short period of time, thereby meeting user requirements [3].

1.3 Advantages

Quickness, variability, and real-time are the characteristics of artificial intelligence. In order to advance computer network technology to a high-speed and stable direction, the first task is to strengthen the sensitivity and breadth of the corresponding technology, so that artificial intelligence can provide the highest quality services. Give computer network technology. The computer system during operation is easily eroded by viruses, causing system crashes or unknown problems. With this technology, it can quickly handle paralysis problems, find out the reasons, summarize lessons, and prevent them in advance. Its work efficiency is much higher than manual processing efficiency.

The birth of fuzzy control algorithm is based on the heuristic knowledge and the principle system of language decision making, which is convenient for better simulation of artificial control steps and skills, improving the adaptability of the control system, and enhancing its intelligence. For the past network management, only some of the system's messages were mastered, and the lack of understanding of the system's internal framework. The use of fuzzy logic can effectively deal with inaccurate information in network management and better control these messages.

Network technology is becoming more and more innovative, which has broadened the scope of network users to a certain extent, and its framework has become cumbersome. At this time, artificial intelligence can assist superiors to supervise lower-level personnel. The complexity of the network framework inevitably leads to cooperation problems. Using multi-agent cooperative distributed thinking can deal with cooperation problems. When confronted with learning problems, interpretation problems, and information logic processing problems, artificial intelligence appears to be at ease.

2. Problems with computer network technology

2.1 Security issues

With the advent of the information age, computer network technology has become indispensable in people's daily life and work, and has also attracted much attention in other regions. The promotion and application of this technology has provided convenient services for people and improved people's lives quality. At the same time, network security issues have also emerged, and the development trend is very tense, which has been closely watched by people from all walks of life. The current network security issues have prompted many users to focus on network control and apply artificial intelligence technology to ensure their network security performance.

2.2 Data is complex

In the current field of big data and artificial intelligence, scientific collection and use of network data resources are the key issues that need to be solved at present. The irregularity of network data is obvious, and it is also accompanied by discontinuity characteristics. With the help of computer technology, data processing problems can be solved quickly and easily. However, the accuracy of this data cannot be guaranteed, more accurate data cannot be obtained, and it is difficult to implement network control and supervision. In order to successfully implement network supervision and control, accurate information and data must be found in complex and irregular network information, and the value of data can be maximized on the basis of ensuring security. It is necessary to apply artificial intelligence to computer network technology.

2.3 Illegal crimes

The continuous development of computer network technology has greatly changed the way people live and work. At the same time, it has given criminals a chance to treat computer network technology as a network business opportunity and commit crimes. In this regard, we must sternly attack such illegal and criminal acts, and improve the observation and resilience of computer network technology. When the computer network is in a complex state, how to strengthen its resilience and observation is the key issue at this stage. Infiltrating artificial intelligence into computer network technology can comprehensively enhance the ability of network supervision and management, ensure that the computer network is in a good operating state, crack down on various network illegal acts in accordance with the law, and prevent illegal elements from using information technology to deceive.

3. Application of artificial intelligence in computer network technology

3.1 Network security management

3.1.1. Smart firewall technology

Firewall is a new technology that guarantees computer security. It has far-reaching significance in network security management. It can block viruses in all directions, reduce the danger of operation, and provide a safe environment for computer network operation. However, in network security management, the ability to prevent hacking attacks and advanced virus intrusion is poor. Since the addition of intelligent firewalls, the use of probability calculations and memory discrimination methods to improve the accuracy of information and data processing and reduce the

amount of system calculations, and protect against hackers and advanced virus attacks. Placing the intelligent firewall in the local area network can play a certain regulatory role, improve security inspection efficiency, quickly deal with other issues such as service sharing, highlight system security features, actively create a green network technology environment, and resist acts that disrupt network order [4].

3.1.2. Intrusion detection technology

The application of intrusion detection technology has improved the security of computer networks to some extent. It is also the representative of firewall technology. Its main responsibility is to create a secure operating environment for the network. This technology can detect the operation of the network at any time, dispose of the network information in detail, and finally pass the detection report to people quickly. It prevents the computer from being attacked in various ways, avoids operating errors, reduces risk, and lay the foundation for the entire data chain security.

3.1.3. Intelligent anti-spam technology

With the widespread use of mailboxes, it meets the needs of daily communication and business work, and also promotes the development of e-commerce marketing. More and more users have started to use emails, which has brought great convenience to people, such as promotional text messages and the issuance of coupons. However, many things are two-sided. A large amount of spam emails will also increase people's annoyance. Some key emails will be put on top. Manual removal will also consume people's time. At this time, we must use intelligent anti-spam technology to eliminate user annoyance. The automatic defense system in this technology can automatically scan the mail in the mailbox, distinguish the mail categories, and inform users which virus mails are convenient for users to dispose of such information in advance, improve mailbox security, and provide convenience to users.

3.1.4. Data mining technology

From the perspective of data, the steps of data mining mainly involve the following points: data screening, data transformation, data mining implementation process, model estimation, and knowledge representation. Data mining technology is an unpredictable and applicable scientific technology for computer data exploration in the past. This technology uses the characteristics of program acquisition and network connection to make the system learn from memory in this link. If the computer network has a special behavior, data mining can be implemented by memorizing the learning messages when judging this behavior. For computer network security management, the role of data mining technology in the detection period is very obvious.

3.2 Network system management and evaluation

Under the influence of economic environment and technology, the network environment has gradually become tedious and transient, thereby increasing the difficulty of the network management and evaluation system. In recent years, artificial intelligence theory has been widely used, and expert judgment and support methods have been born. Based on scientific experimental results, it has been more widely used in more application fields. With the development and promotion of the artificial intelligence expert system, the experience of experts in this field can be sorted and summarized, and then this experience can be integrated and recorded in the system. This kind of system knowledge is gradually strengthened through continuous accumulation and optimization, which can effectively solve the similar problems. On the other hand, the development of artificial intelligence can further strengthen the work quality and efficiency of network management and evaluation systems.

3.3 Online education teaching application

Based on the big data environment, the teaching method has undergone a qualitative change, breaking the traditional blackboard writing model, starting to use intelligent tools, highlighting the diversity of courseware production, stimulating students' enthusiasm for learning, and increasing the

number of interactions between teachers and students. With the widespread application of artificial intelligence, it has enriched the resources of education and teaching websites, helped teachers analyze the learning situation of each student, understand the problems existing in students, and improve teacher work efficiency [5].

4. Application prospects of artificial intelligence in computer networks

4.1 Artificial neural network

Artificial intelligence is a very challenging technology. If you want to join the computer network team in daily life, you must be familiar with and understand computer knowledge, linguistic knowledge, psychological knowledge and physiological knowledge. While artificial intelligence promotes technological innovation, it has had a greater impact on all aspects of human society and provided great convenience. Under the support of artificial intelligence network technology, the constituent elements of the artificial nervous system are connected by multiple processing units, which is characterized by strong self-learning skills, can handle different multi-dimensional nonlinear problems by itself, and alleviate the limitations of the problem-solving category. Both quantitative and qualitative problems can be handled by the artificial nervous system. At the same time, the artificial neural system has a system storage space close to the human brain's thinking, assisting users to deal with a variety of problems, achieving efficient management purposes, and meeting users' requirements for computer data processing.

4.2 Machine learning

The development of artificial intelligence is based on the imitation of human brain thinking, so in the later development stage of intelligent robots, technicians should regard learning as the focus of artificial intelligence. Although artificial intelligence already has learning effects, if it is similar to human learning skills, it is necessary to further enhance the level of learning. Compared with artificial intelligence, the neural structure of the human brain is more cumbersome. Humans can arbitrarily express their feelings. Artificial intelligence has to distinguish facial expressions, which has obvious limitations. Times are constantly changing, artificial intelligence will have better development prospects in the computer field, highlighting human characteristics, and machine learning will complete the human brain thinking learning tasks through computer science models.

4.3 Pattern recognition

Based on the current environment of the computer field, the development direction of electronic equipment has become diversified, and a large amount of software has emerged for computer users. Software engineers analyze and study various types of software with the help of human voice. The sounds and sounds that people come into contact with in life are realized by vibration conduction. When the development of artificial intelligence is in its early stage, if you want to distinguish external sounds, you must rely on sonar equipment. It is only aimed at external ultrasonic information mobile phones, cannot communicate with humans directly. Although the computer can complete the automatic discrimination work, such as the character image, text, sound distinction, but its external perception ability is weak. Therefore, simulation recognition has been promoted. Technologists should deepen their research on multiple dimensions, better transform the physical morphological dimensions, and realize the identification and collection of different audio information through a new sonar system, so that they can move towards highly simulated targets [6].

5. Conclusion

In summary, the promotion and use of artificial intelligence technology has brought great convenience to people's life and work. Not only has it enhanced the security of computer network management, but its effect in system evaluation is also very obvious. Therefore, only by intensifying innovation and reform can we promote the rapid development of artificial intelligence, reflect its advantages, and create a safe environment for the application of artificial intelligence in

computer networks.

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