

# Research on the Application of Artificial Intelligence in Computer Network Technology

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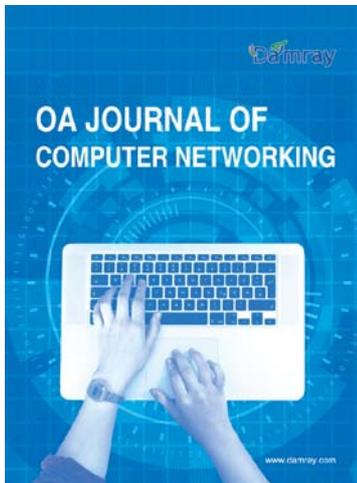
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## Abstract

Under the influence of the continuous improvement of modern science and technology, computer network technology has achieved a wide range of applications in all walks of life, providing great convenience for people's daily work and life, and effectively improving the level of social operation and development; The advent of the era of data, and the emergence and application of advanced technologies such as artificial intelligence and equipment and facilities have effectively improved the level of intelligent development of computer network technology; therefore, in daily work, technicians can strengthen the role of artificial intelligence in computer network technology. Application, to improve the application level of computers, and at the same time promote the healthy development of social and economic construction. The following mainly analyzes and explores the application of artificial intelligence in computer network technology.

## Keywords

Artificial Intelligence, Computer Network Technology, Application



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## 1. The specific concept of artificial intelligence technology

Usually, the so-called artificial intelligence technology, also known as machine intelligence, belongs to one of the emerging technologies in essence, and with the application of computer technology, people's thinking, behavior patterns and other learning imitation, so as to achieve intelligent operation and control management of machinery and equipment, in part of the work can replace the traditional manual, saving labor costs, while avoiding the error of manual operation It can also avoid the emergence of undesirable problems caused by manual errors, and thus promote the progress and improvement of people's daily work level and quality [1].

## **2. The advantageous role of artificial intelligence technology application**

### **2.1. Low operating costs**

After the investigation of modern computer network technology, it is found that when artificial intelligence technology is applied, it can effectively reduce the energy loss in the process of data computing and ensure that the calculation process is stable and efficient; at the same time, by strengthening the application of artificial intelligence technology, it can effectively replace the traditional working methods and improve the level of computing, while reducing the consumption of its construction costs, fully guaranteeing the relevant industry The level of operation and development.

### **2.2. Timely handling of undesirable problems**

At the same time, artificial intelligence technology in the practical application, due to its own characteristics, most of its fuzzy logic reasoning and processing way to carry out daily work; and because there is a lot of fuzzy and uncertain information in the modern computer network system, the traditional computing and processing technology not only can not effectively interpret and process this information, but also cause some bad problems; therefore, in the actual work, the relevant units and Therefore, in practice, the relevant units and personnel need to actively refer to artificial intelligence technology to analyze and process the relevant information with the help of its superior network management and information processing ability, so as to avoid the emergence of undesirable problems and provide great convenience and guarantee for the overall healthy development of modern computer networks.

### **2.3. Stronger coordination**

Because of the strong openness of modern Internet technology, when the computer network system is in daily operation, the data and information involved in it has greater complexity, which affects the overall operation of the relevant industry; for this reason, relevant units and personnel can strengthen the application of artificial intelligence technology, with its own excellent coordination ability, through the network system for hierarchical monitoring and detection, coordination between the upper and lower levels, to The traditional manual processing method can be replaced to ensure the level and quality of network management work, while promoting the overall healthy development of modern computer network systems.

### **2.4. Strong learning ability**

In addition, when artificial intelligence technology is actually applied, its strong learning ability plays an extremely important role; in actual work, as there is a large amount and complexity of data information in the computer network system, a considerable part of the information has a certain value, relevant units and personnel can strengthen the application of artificial intelligence technology, comprehensive collection and analysis of information management, and in this way to develop a more To ensure the overall healthy and stable operation and development of the relevant units and industries.

## **3. The current situation of the application of computer network technology**

### **3.1. High security risks**

With the continuous improvement of modern technology, a large number of modern advanced technologies are used in people's daily work and life, and provide them with great convenience and promotion; however, with the dependence of a large number of people on computers and other modern technologies, it is easy to cause network security problems, which will greatly affect their economic benefits and also cause adverse social impact problems.

### **3.2. Network information is too complex**

Under the influence of the era of big data, the number and type of data information in the Internet is large, and there are also irregularities and discontinuities, if it is not managed in a standardized manner, it is easy to cause adverse effects on some computer equipment and users; therefore, the relevant departments in their daily work to strengthen the importance of network monitoring work, and with the application of modern advanced technology and equipment and facilities of artificial intelligence, to a large number of complex data information to analyze and filter out the real and effective information to meet the needs of daily work [2-6].

### **3.3. Highly susceptible to cybercrime phenomenon**

In addition, because some of the lawless elements themselves have a high level of computer network technology and use it as a tool to help them achieve illegal criminal behavior, at the same time, because of the late development of China in this area, there are certain loopholes and deficiencies in the relevant laws and regulatory mechanisms, thus providing a certain opportunity for lawless elements to take advantage of, in order to avoid the emergence of these my problems, the relevant departments need to improve the In order to avoid these problems, the relevant departments need to pay more attention to computer network crime, and actively introduce modern technologies such as artificial intelligence, improve the level of network management, establish a sound management system, and further ensure the healthy development of modern computer network management field.

## **4. The practical application of artificial intelligence in computer network technology**

### **4.1. Applied to data collection and analysis**

In the current period, in order to strengthen the application of artificial intelligence in computer network technology, the relevant units and personnel first need to strengthen its application in data collection and analysis, through the collection, analysis and classification management of a large amount of data, screening out valuable information to ensure the smooth implementation of the relevant work; at the same time, the collection and analysis of data information with the help of artificial intelligence technology, but also the data processing At the same time, the collection and analysis of data and information with the help of artificial intelligence technology can fully guarantee the quality and accuracy of data processing and lay an excellent foundation for the smooth implementation of the later work.

### **4.2. Application in software and hardware upgrading**

Usually, in the operation of modern computer equipment, hardware and software belong to an extremely important position, which determines the level of computer operation; for this reason, technical personnel can strengthen the application of artificial intelligence technology in hardware and software update and upgrade, through the analysis of computer user behavior, regularly push the update and upgrade information for them, to ensure the effectiveness of the computer internal hardware and software, to avoid the emergence of It can ensure the effectiveness of the internal software and hardware of the computer and prevent them from having hidden security risks and problems that affect the normal work of users.

### **4.3. Application to network resource sharing**

As we all know, the computer network system itself is highly open, and the number of internal network resources is extremely large. Convenience, so as to ensure the healthy development of modern computer network systems.

### **4.4. Application to network security management**

In addition to the above, in order to strengthen the application of artificial intelligence technology in computer network technology, relevant units and personnel also need to apply it to network security management, and combined with the application of intrusion detection, intelligent firewall and other technologies, through the understanding of computer data and analysis of processing, etc., while controlling network information access, the data and information involved in the computer network system to classify the whole, when suspicious information is found it needs to be processed in time to guarantee the security of the computer system and provide a sufficient basis and guarantee for the daily work life of the relevant users [7-10].

## **5. Conclusion**

In summary, computer network technology, as one of the important links in the operation of modern society, has a great impact on people's daily work life; for this reason, relevant units and personnel can strengthen the application of artificial intelligence technology in it, screen and optimize the processing of relevant data and information, avoid information loss and other phenomena, guarantee the security of the computer network system itself, and then promote the further development of the modern network field as a whole.

## **References**

- [1] Tang Qingyi. (2019). Research on the application of artificial intelligence in computer network technology in the context of big data era [J]. Digital Technology and Applications, 2019, 037(010): 72-73.

- [2] Liu Yang. (2019). Research and application of artificial intelligence in computer network technology [J]. Information and Computer (Theory Edition), 2019, 421(03): 160-161+176.
- [3] Li C. W. (2020). Research on the application of artificial intelligence in computer network technology in the new era [J]. Information Communication, 2020, No.207(03): 81-82.
- [4] Hou F. (2020). Research on the application of artificial intelligence in computer network technology--a review of "Cloud computing system and artificial intelligence application" [J]. Forest Industry, 2020, v.57; No.334(02): 122-122.
- [5] Wen Jia. (2019). Application of artificial intelligence in computer network technology in the era of big data [J]. Times Agricultural Machinery, 2019, v.46; No.325(11): 37+39.
- [6] Cui Juan, Wu Lei. (2019). On the application of artificial intelligence in computer network technology in the era of big data [J]. Digital User, 2019, 025(022): 214.
- [7] Lin Guoqing. (2020). Research on the application of "Internet+" artificial intelligence in computer network technology [J]. Digital World, 2020(9).
- [8] Cui YM. (2020). Research on the application strategy of artificial intelligence in computer network technology in the era of big data [J]. E-commerce, 2020, No.245(05): 26-27.
- [9] Li Sheng. (2019). Based on the application of artificial intelligence in computer network technology in the era of big data [J]. Electronic Testing, 2019, 000(004): 125-126.
- [10] Li L. (2020). Analysis of the use of artificial intelligence in computer network technology in the context of big data era [J]. Satellite television and broadband multimedia, 2020(13).