Application of artificial intelligence in computer network technology under the background of big data era

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Abstract: The development of computer network technology is the trend of future social development, and the integration of artificial intelligence and computer technology, while enriching people's daily life, has also become an inaccessible part of people's daily life. Artificial intelligence technology is relying on computers The technology-based development was established, and because of its high intelligence, it has become one of the most promising technologies in computer networks. In order to accelerate the application of artificial intelligence in social production and life, and to facilitate production and life. Starting from the importance and necessity of artificial intelligence applications, the application status and its development advantages are introduced, and specific applications of artificial intelligence in computer networks are proposed.

1. Introduction
The development of society and economy has promoted the development of computer network technology. At the same time, the development of society also needs the support of computer network technology. Artificial intelligence, as a new field in computer network technology in recent years, is solving complex information. It has unique advantages and meets the needs of social development. As a result, artificial intelligence technology has gradually been widely used. However, due to certain problems in technology integration, exploring the application of artificial intelligence has great production value.

2. Necessity of using artificial intelligence in computer network technology
The rapid development of modern network technology, whether it is a country or an individual, uses network technology to store, transmit, and manage information. This information involves economic development and is an important property of the country or individual. Network technology provides conditions for the sharing of information. At the same time, it also provides a development platform. Through the information platform and the correct way, people can obtain the information they need from the Internet. However, because of technical loopholes, criminals often steal important information, including patent copyrights and academic articles. It has greatly harmed the interests of the victims and caused economic losses. Therefore, the work of network information security has been highly valued by the country, and network security has become one of the country's strategic tasks [1]. But through related network management The work is far from meeting the requirements of information security. Therefore, it is necessary to eradicate threats at a fundamental level. Traditional information processing cannot effectively verify the procedures and the security and authenticity of the information. It is formulated for the integration of information and cannot be effectively identified. Possible risks among them: artificial intelligence and computer networks The integration of technology provides a direction for relevant programs to identify and identify risks on the basis of the fast and convenient integrated network
technology, so it has the ability to identify dangers autonomously. It simulates human thinking to perform information processing and screens out the inaccuracies. Stable factors further exclude threats. In terms of information processing efficiency, this is not possible with traditional network technology. It is only necessary to set up the artificial intelligence operation mode in the early stage, and to process the data in a targeted manner within a short period of subsequent work. It has greatly saved time resources. In many college education courses, in order to meet the needs of future talents, network technology professional courses such as e+ courses have been set up. It can be seen that the application of computer network technology has been valued in many fields. In short, regardless of whether from the national level or the individual level, strengthening the specific application of artificial intelligence technology in computer networks is of great significance in protecting the national political and economic security and personal interests.

3. The advantages and current status of artificial intelligence

3.1 Advantages of using artificial intelligence

The first advantage of artificial intelligence technology is the fast processing of information data, which can significantly improve the security of information. The encrypted data processed by artificial intelligence can make communication between computer network users more secure, effectively preventing criminals from passing through the network. The behavior of stealing user privacy provides an effective solution for the protection of Internet data. Although artificial intelligence technology plays a very important role in data protection, it is difficult to implement it in a comprehensive manner due to its technical difficulties. Difficulty, not only because of its complicated procedures, but also wide variety. It is not universally used by network technicians, so there is still a certain gap in the comprehensive popularization of artificial intelligence technology in the information security level. In addition, its advantages are also reflected in the following aspects: First, to provide experimental conditions for the conduct of special experiments. When conducting experiments that require a large number of specific ways of processing data, artificial intelligence technology can well overcome the experimental process. Complex influencing factors lead to more accurate experimental data. Second, artificial intelligence can provide more convenient and high-quality services. Through the case of Google's artificial intelligence Alpha Dog playing Go, you can understand that artificial intelligence has strong learning capabilities, so by learning some professional service skills, you can provide people with more humanized services. For example, setting up an artificial intelligence machine in the library can recommend books to different groups of people according to the characteristics of the crowd to achieve customized services. Third, save capital costs. Once the artificial intelligence industry chain technology is mature, it can develop production and management functions. The artificial intelligence machinery manufacturing equipment has solved the manufacturing cost for the production company, and also guaranteed the quality.

3.2 Status Quo of Application of Artificial Intelligence in Computer Networks

In addition to the provision of information security services, artificial intelligence has also played a role in people's life services, such as self-service unmanned restaurants and the emergence of unmanned hotels have pushed artificial intelligence technology to new heights. The use of artificial intelligence is beneficial. Disadvantages, in order to understand the relationship between pros and cons more clearly, the following aspects need to be considered. First, security and insecurity. Because of the ability of artificial intelligence settings to simulate human thinking, if it spontaneously seizes information and data, it is extremely dangerous to use it for illegal purposes. Second, manageability and manageability. Although artificial intelligence technology shows great convenience in managing information, artificial intelligence may someday due to highly concentrated thinking modules. It will have an independent consciousness and jump out of the computer logic language set by humans. Becoming a "network creature" will cause humans to be under the control of artificial intelligence, which is a very terrible thing. From the current level of artificial intelligence development, artificial intelligence is still In the
development stage, it is inevitable to consider the above issues in order to be prepared. In the future, development of artificial intelligence, in order to avoid the above situation, the state needs to develop relevant control and supervision mechanisms to avoid the abuse of artificial intelligence and unauthorized development [3].

4. Application of artificial intelligence in different computer network scenarios

4.1 Application of artificial intelligence technology in e-commerce
Business activities involve the transfer of information. It can be said that the development of e-commerce is based on computer network technology. Today, e-commerce activities are becoming more and more frequent. For the convenience of work, many companies cooperate on the Internet, which makes many business secrets stored on computer networks. The openness and sharing of computer networks make these critical information face greater threats. If the security of business data in e-commerce is not effective, the protection of the company will bring profit losses to the company, affect the business activities, and hinder the development of e-commerce to a certain extent. In the process of e-commerce activities, artificial intelligence technology can be used for important data information is encrypted to ensure the security of information storage and transmission. The application of artificial intelligence technology in business activities not only ensures the company's data security, but also increases the user's sense of security, which is a guarantee for the interests of both parties [4].

4.2 Application of artificial intelligence technology in information signature verification
Information signature verification technology is a kind of verification technology in AI to verify the identity of the user. This verification is mainly to verify whether the identity of the user is consistent with the reserved identity information. It is generally used in financial cooperation such as commercial cooperation and banking business and financial-related activities have a wide range of applications. There are two types of information signatures, one for publicly used information encryption and the other for privately used information encryption. But the more widely used is public information signature verification technology. Because of the high security requirements in this area in public utilities, there is also the rise of online payment, and more and more people have begun to use Alipay and other online payment methods to handle various businesses, achieving the goal without leaving the home. You can easily enjoy the convenience brought by the Internet. By using the technology of information signature verification, you can effectively protect the security of information and property when people conduct business online.

4.3 Application of artificial intelligence technology in virtual internet
With the combination of finance and computer information technology, coupled with the advantages of fast and convenient computer network office work, many enterprises and institutions have established their own dedicated virtual Internet. Most of these Internets are commissioned by enterprises or institutions to use third-party Internet technologies. Development Co. Ltd. was established, which is a dedicated Internet information network that conforms to the internal characteristics of enterprises. This type of Internet is mostly a local area network, but the problem that comes with it is that the local area network is not highly secure, and it is vulnerable to invasion by external viruses. Value data is then lost, so companies and institutions should consider data security issues when building internal LANs, consider installing artificial intelligence software, and transmitting artificial intelligence to protect their legitimate rights and interests.

4.4 Application of artificial intelligence technology in computer network software
Computers often use anti-virus software to scan for viruses. Although ordinary anti-virus software can effectively find the location of the virus, when anti-virus software is in operation, because anti-virus software does not have a defense function when it encrypts other software, it is vulnerable to other virus attacks, which in turn increase the risk of infection of the entire system [5]. Therefore, when encrypting
applications, you can first use artificial intelligence technology to conduct a comprehensive and comprehensive inspection to ensure that the encryption program is safe in progress. Encrypt work to improve the security of subsequent operations, or develop anti-virus software with artificial intelligence technology to maximize the technical utility.

4.5 Application of Artificial Intelligence Technology in Internet Database
In China, there are generally two types of Internet database platforms in computer networks commonly used by financial companies. One is Windows and the other is Unix. The security level of Internet databases is not particularly high. Generally, the security category is relatively low. Due to the system and low security level, it is very easy for criminals to steal data and tamper with it. Using artificial intelligence technology, after the data enters the database, the computer analyzes the operating environment of the data itself, and then presses The security level is classified and stored, so that the most important files have exclusive protection, thereby effectively ensuring the security of the internal database of the enterprise.

5. Conclusion
In summary, in today's fast-changing science and information technology, although the application scope of computer networks is becoming wider and wider, and its information security protection technology is continuously improved, the development of computer network security cannot be ignored. Therefore, artificial intelligence as a branch of computer science, its application on computer networks will become more and more common. While constantly upgrading computer network systems, we must also pay attention to further research and development of artificial intelligence technology, in order to provide effective computer network security. stand by.

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