

# Research on the Fusion of Artificial Intelligence and 6G in Computer Network Technology

Wu Xu  
Suzhou Industrial Park  
Industrial Technology School  
Jiangsu, Suzhou, 215000  
China

---

**Abstract:** With the rapid development of information technology, in the 6G era, the popularization and application of artificial intelligence technology has an irreplaceable role in the operation and management of enterprises and the realization of sustainable development. The application in the development of industry, agriculture and other industries has greatly improved production. Efficiency and quality. The development of computer technology has created conditions for the development of artificial intelligence technology. In turn, the innovative development of artificial intelligence has also promoted the development of computer networks to a certain extent. With the advent of the "Internet +" era, computer network technology has had a huge impact on people's production and life.

**Keywords:** Artificial Intelligence, 6G, Computer Network Technology, Fusion Modeling

---

## 1. INTRODUCTION

Artificial intelligence and big data are the products of the rapid development of modern computer network technology. If we want to improve the application level of artificial intelligence and big data technology in this context, you should combine the application of the two technologies with computer network technology. By exploring the application forms of the two technologies in the development of computer network technology, we can more clearly define the current development trend of computer network technology, facilitate the corresponding technology research and development control, and meet the scientific development needs of computer network technology research and development [1-6].

This article focuses on the research of big data era and artificial intelligence application in computer network technology. Its significance lies in combining its technical application with computer network technology application according to the definition of big data era and artificial intelligence technology, so as to improve the level of computer network technology development and meet the needs of computer the actual needs of network technology development management. Artificial intelligence and big data are the products of the rapid development of modern computer network technology. If you want to improve the application level of artificial intelligence and big data technology in this context, you should combine the application of the two technologies with computer network technology. By exploring the application forms of the two technologies in the development of computer network technology, we can more clearly define the current development trend of computer network technology, facilitate the corresponding technology research and development control, and meet the scientific development needs of computer network technology research and development. This article focuses on the research of the big data era and artificial intelligence application in computer network technology. Its significance lies in the combination of its technical application and computer network technology application according to the definition of big data era and artificial intelligence

technology, so as to improve the level of computer network technology development and meet the needs of computer the actual needs of network technology development management. In the context of the development of computer networks, people's awareness of network information security has also been improved [7-15].

Today, while artificial intelligence technology provides people with convenience in life, it also brings a greater risk of network information application. In recent years, the news of network fraud and network information misappropriation has always been a hot spot of social concern. The public is highly vigilant about network information security. In order to improve the quality of network monitoring and ensure network security to the greatest extent, it is recommended that relevant departments strengthen network monitoring and management. Guarantee the security and scientificity of network information to the greatest extent, and finally realize comprehensive network monitoring and management. Computers can make quick calculations on data that does not have continuity and regularity, so as to derive data algorithms and find potential relationships. However, it is difficult to find leaks in a multi-channel information interaction environment only by tracing the source of information through information processing, and it is difficult to investigate abnormal data, and the staff lacks skill and processing accuracy is not high. Artificial intelligence technology can effectively reduce the difficulty of manually querying data and improve the quality of integrated management of network data. For example, an artificial intelligence-based information access and tracking system can be established to achieve the purpose of automatic search and information reading. In the entire network operation, problematic data can be processed in time, and existing failures can be dealt with. In addition, artificial intelligence can also deal with the problem of network delay and ensure the operation of computer network information to the greatest extent. Finally, the use of artificial intelligence technology can also reinforce the security system and ensure the security of the use of user information to the greatest extent [16-21].

With the continuous development of the times and the continuous iterative development of various dimensions of technology, Internet technology, big data, Internet of Things, 6G technology, etc. are constantly popularizing, and they are also constantly merging with various industries. With the development of new infrastructure development calls, smart technology and industry the in-depth integration is an important trend for a long time in the future. This trend will affect the industrial structure of many industries [22-24].

## 2. THE PROPOSED METHODOLOGY

### 2.1 The 6G Communication Network

In the future B5G/6G edge network, due to the diversification of service requirements and the explosive growth of the number of connected devices, there is an urgent need for a new artificial intelligence-supported management and control paradigm based on highly heterogeneous infrastructure, wireless access, and computing. And storage resources to realize the self-awareness, self-configuration, self-optimization and self-repair of the network.

### 2.2 The Artificial Intelligence Principles

At present, the application of artificial intelligence technology mainly used in computer networks is mainly reflected in three aspects: Under the new situation, the application of artificial intelligence technology in computer networks can realize effective defense against spam. The majority of users often receive spam harassment while using computer mailboxes for communication, which seriously affects the user's computer service experience. And people use artificial intelligence technology to avoid users being harassed by spam to the maximum extent. Specifically, artificial intelligence technology is based on users receiving emails through their mailboxes, and automatically detects the security of emails, accurately checks and finds out junk emails from numerous emails in a timely manner, and friendly reminds users to delete and other operations. To a certain extent, it can ensure the safety and reliability of the user's mailbox to send and receive emails, and it can also greatly improve the user's computer experience, and increase the degree of trust and recognition. Artificial intelligence agent technology is artificial intelligence agent technology, which is a software entity composed of knowledge domain library, database, explanation reasoner, and communication between agents. The artificial intelligence agent technology processes new information and data through the knowledge domain database of each agent, and finally communicates to complete the task. Artificial intelligence Agent technology can obtain automatic search of information through user customization, and finally deliver it to the designated location.

People can get humanized services through Agent technology. For example, when a user uses a computer to find information, this technology can analyze and process the information, and the useful information obtained can be given to the user, which saves the user's time. Agent technology can also provide users with daily life services, such as online shopping, scheduling, meeting arrangements, mail receiving and sending and other things. The artificial intelligence agent technology is also autonomous and learning, which can make the computer automatically complete the tasks assigned by the user and continuously promote the development of computer network technology. The computer has extremely powerful calculation speed. As long as the performance of the computer meets the requirements, it can deal with problems in real time, and the response speed depends on the hardware facilities, so that the computer can better deal with problems and be more

rational when facing problems. The essence of artificial intelligence is to make machines have the ability to handle affairs individually.

### 2.3 The Integration of Artificial Intelligence and 6G in Computer Networks

As we all know, the use of artificial intelligence technology can achieve direct management of computer networks, and can also make a scientific, reasonable and effective comprehensive evaluation of computer systems. The staff use artificial intelligence to carry out network management work, which is conducive to improving the level of computer technology. At the same time, it can also improve the performance of the computer from many aspects and angles. Using artificial intelligence technology, industry experts and scholars can break through the limitations of time and space under the traditional working mode, and achieve effective network management anytime, anywhere.

After the timely development and application of new computer systems, staff can also use artificial intelligence technology to comprehensively and systematically evaluate computer systems anytime and anywhere, so as to make targeted improvements and perfect new systems based on actual conditions and existing problems. Judging from many practical experiences, experts and scholars' innovation suggestions, optimization and upgrading measures for network systems are all based on artificial intelligence technology and methods. In other words, artificial intelligence technology plays a role in computer system innovation, optimization and upgrading. The irreplaceable role is precisely because the application of artificial intelligence technology makes continuous innovation and improvement of computer technology possible. Under the economic construction, the application field of artificial intelligence is gradually expanding. It not only plays an obvious role in industrial production, but also has important application value in the construction and management of modern enterprises. First of all, artificial intelligence technology can realize the automatic monitoring and management of the enterprise, which can improve the progress tracking, employee inspection, and work follow-up of its leadership, and comprehensively improve the management efficiency of the enterprise.

In addition, the intelligent management method provided by artificial intelligence not only promotes the high-efficiency construction of the enterprise, but also achieves the goal of low-cost and high-yield, which is of great value to the comprehensive investment and construction of the enterprise. Finally, artificial intelligence technology can realize self-learning through continuous accumulation.

## 3. CONCLUSION

The combination of artificial intelligence technology and computer network technology has promoted the high speed and safety of computer network operation to a certain extent, and has improved the efficiency and quality of computer network management. my country's computer network technology is in the stage of innovative development, and the rapid development of the economy and society provides a good environment for the application of artificial intelligence technology in computer networks. Therefore, in the context of big data, the combination of artificial intelligence technology and computer network technology is an inevitable trend for technological development. The two promote each other to provide users with more secure and convenient network.

#### 4. REFERENCES

- [1] Deng Haobing. On the application research of artificial intelligence in computer network technology[J]. Digital World, 2018, No.150(04):552-552.
- [2] Liao Jianfeng. The application of artificial intelligence in computer network technology[J]. Computer fans, 2018, 000(016):207,209.
- [3] Ren Miaomiao, Shi Renjie, Shu Xiaobin. Application research of artificial intelligence in computer network technology[J]. Information and Computer, 2018, No.403(09):131-132.
- [4] Mao Jielei. Artificial intelligence and its application in computer network technology[J]. Digital Technology and Application, 2018(3): 77-81.
- [5] Xie Jingwei. The application of artificial intelligence in computer network technology[J]. Contemporary Educational Practice and Teaching Research, 2020(08):44-45.
- [6] Lu Lantao. Research on the application of artificial intelligence in computer network technology[J]. Digital Communication World, 2018, No.159(03):205-205.
- [7] Zhu Changxin. Research on the application of artificial intelligence in computer network technology [J]. Bonding, 2020, v.41; No.311(01):93-96.
- [8] Shi Zhifang. Application research on the integration of artificial intelligence and computer network[J]. Computer Fan, 2019, 000(002):196.
- [9] Ma Shuyan. Research on the application of artificial intelligence in computer network technology[J]. Commodity and Quality, 2018, 000(009):175,182.
- [10] Fu Da. Research on the application of artificial intelligence in computer network technology in the era of big data[J]. Electronic World, 2020, No.586(04):171-172.
- [11] Zhang Lei. The remote intelligent monitoring system of the network control center[J]. 2021(2014-19):11-11.
- [12] Cao Qi. Research on the application of artificial intelligence in computer network technology [J]. Future Talent, 2018, 000(004): 250.
- [13] Yang Zuomin. Research and Application of Artificial Intelligence Technology in Intelligent Weaponry[J]. Artificial Intelligence and Robot Research, 2021, 10(3):12.
- [14] Zhang Yi. Knowledge Discovery from the Perspective of Intelligent Bibliometrics: Artificial Intelligence + Information Metrology[J]. World Science and Technology Research and Development, 2021, 43(4).
- [15] Lei Xuezhi. Research on the application of artificial intelligence in computer network technology[J]. Computer Products and Circulation, 2020(03):8-8.
- [16] Shen Shufan. Research on the application of artificial intelligence in computer network technology[J]. Microcomputer Information, 2018, 000(001):148-149.
- [17] Lin Guoqing. Research on the Application of "Internet +" Artificial Intelligence in Computer Network Technology [J]. Digital World, 2020(9).
- [18] Yang Mancang. Research on the application of artificial intelligence in the era of big data in computer network technology[J]. Science & Technology Information, 2020, v.18; No.581(08):10-11.
- [19] Wu Yu, Wu Xiaoli. Research on the Application of Artificial Intelligence in Computer Network Technology[J]. Computer Products and Circulation, 2020(10):94-94.
- [20] Wang Guorong. Research and Application of Artificial Intelligence in Computer Network Technology[J]. Curriculum Education Research: Study of Learning Method and Teaching Method, 2019(10):285-285.
- [21] Suo Zihao, Ding Hao. Research on the application of artificial intelligence in computer network technology[J]. Digital Communication World, 2018, 000(001):166,185.
- [22] Wu Yuewen . Research on the application of artificial intelligence in computer network technology [J]. Easy to Learn Computer, 2019, 000(001): P.133-133.
- [23] Gao Jie. Research on the application of artificial intelligence in computer network technology[J]. Science & Technology Information, 2019, 17(02):48-49.
- [24] Wu Yuewen. Research on the Application of Artificial Intelligence in Computer Network Technology[J]. Electronic Paradise, 2019(1):133-133.