

# Computer Information Processing Technology and Strategy in the Era of Big Data

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**Abstract:** After China officially entered the era of big data, the amount of information increased rapidly, and the amount of information processing and storage increased. In order to ensure the smooth development of various production work related to it, people put forward higher and stricter requirements for computer processing technology. Due to computer virus intrusion and malicious attack by hackers, information security is seriously threatened, and computer security has attracted great attention. Taking the era of big data as the background, this paper makes a detailed analysis of computer information processing technology and related application strategies to ensure that big data and computer network have high security, and lay a solid foundation for giving full play to the role and value of computer information processing technology.

## 1. Introduction

As a new product in the era of big data, the emergence and wide application of computer technology not only provides a positive driving force for the innovation and development of industrial models in all walks of life, but also makes earth shaking changes in people's traditional work and life patterns. As one of the basic functions of computer technology, the main purpose of information processing technology is to deeply mine the content with high value behind the information data. Under the background of the big data era, the amount of information owned by all walks of life has increased sharply, and great attention has been paid to whether they have the ability to effectively process all kinds of information. Therefore, the computer processing technology adopted should not only meet the production demand, but also provide positive help to promote the development of the industry by taking diversified and effective measures, continuously optimize and innovate information processing technology.

## 2. Types of Computer Information Technology

### 2.1 Data Mining Technology

In the process of the continuous development of big data technology, the massive data information in the network has been effectively integrated. These data are not only closely related, but also can objectively present the actual needs of customers. However, in a large amount of data, there are always some useless information for enterprise development. Therefore, how to mine high-value content from massive data information has become an important way for enterprises to achieve their development goals under the background of big data era.

For data mining technology, it is mainly through the flexible application of highly systematic information processing means, clearly grasp the internal relations between data, and effectively screen massive data information through reasonable processing, integration and analysis, retain high-value information data and eliminate useless data. Through the effective application of data mining technology, enterprises can not only ensure that the information mined in the database plays a positive role in promoting the all-round development of enterprises, but also help enterprises fully grasp the actual needs of customers, so as to formulate highly targeted and feasible schemes and reduce the cost of enterprise investment in information collection, ensure the continuous

improvement of economic benefits obtained by enterprises <sup>[1]</sup>.

## **2.2 Cloud Computing Technology**

To ensure that the functions of the computer can be brought into full play, we must take diversified and effective measures to improve the hardware environment and software equipment quality of the computer. In order to ensure that all software devices can keep up with the development of big data in the process of the all-round development of computer technology, the new concept of cloud computing was born.

For cloud computing, it can effectively program and process a large amount of information in the Internet, not only effectively integrate the computer software and hardware, but also make the internal transmission protocols of the computer fully applied. However, the application of cloud computing technology in China is late, and the overall development is lack of perfection. Although the problems existing in computer software and hardware can be effectively solved, it still can't reduce the dependence on the performance of computer software. Therefore, in order to further improve the overall development level of computer information technology, we should also conduct in-depth research on cloud computing technology <sup>[2]</sup>.

## **2.3 Intelligent Algorithm Technology**

For intelligent algorithm technology, it is mainly to develop a new computing method by making full use of various phenomena in nature, simulate and think about various survival mechanisms in organisms, and use programming to effectively integrate the survival modes of organisms in intelligent computing methods, so as to combine modern algorithm technology, make people more convenient, faster and easier to achieve the processing goal and optimize the processing effect in the process of processing data and information.

With its diversified advantages, computer intelligent algorithm has been widely used in various fields. Simulated annealing algorithm and ant colony algorithm are common computer intelligent algorithm technologies at present. Through the flexible application of computer intelligent algorithm technology, it can effectively make up for the shortcomings of traditional algorithms, continuously improve the working efficiency of the computer and optimize the information processing capacity of the computer <sup>[3]</sup>.

## **2.4 Firewall Technology**

In the process of the comprehensive popularization of network technology, enterprises should attach great importance to the security of network information and constantly improve it. In the network society, virus intrusion, hacker attack and other phenomena emerge one after another. If enterprises want to ensure that their data information system has high security, they must take effective measures to effectively prevent virus intrusion and hacker threat. Firewall technology has advanced and scientific nature, and can meet the needs of enterprises to improve information security.

For firewall technology, it is a method that can effectively integrate computer hardware and software. By closely connecting internal and external networks, private networks and public networks, a protection barrier with high integrity and effectiveness is established. During the daily production and management of the enterprise, by installing the firewall software into the computer system, the security hidden dangers existing in the network can be effectively blocked, and the software virus intrusion and unauthorized users' access to the computer can be prevented <sup>[4]</sup>.

## **3. Effective Application Ways of Computer Information Technology under the Background of Big Data Era**

Under the background of big data era, the application ways of computer information processing technology has high complexity and systematicness. If you want to give full play to the role and value of computer processing technology, you must attach great importance to the management of each stage.

### **3.1 Attach Great Importance to the Management of Information Transmission Stage**

Under the background of the continuous improvement of China's social modernization development level, Internet technology and computer technology have developed rapidly, especially the continuous improvement of computer information processing technology. Although it can provide positive help for all walks of life to carry out production and management, it also brings more threats and tests to the all-round development of information technology engineering.

In the process of expanding the amount of information transmission, in order to ensure the high security of information electronic technology, it is necessary to effectively prevent various uncertain factors. This is because the Internet provides a transmission platform for information technology. The problems of virus infection and hacker intrusion in the Internet will also pose a serious threat to the quality and efficiency of computer information processing technology. Therefore, we should pay more attention to the relevant management work in the information transmission stage, continuously improve the function of computer information processing technology, optimize and improve the system vulnerabilities, ensure that the regional information attack ability of the system is further enhanced, and comprehensively improve the security and effectiveness of information in the transmission stage <sup>[5]</sup>.

### **3.2 Attach Great Importance to the Safety Management of Information Technology Engineering**

At this stage, one of the important factors for the safe and orderly development of China's electronic information engineering is the quality of security management. From the overall point of view, there are many problems in the current computer information security management, which not only lacks high security and reliability, but also the level of the overall guarantee mechanism is difficult to improve.

Information engineering has an extremely wide range of functions and can provide help for the transmission of important information between countries or enterprises. However, when the security mechanism can't play its due role and value, it is likely to cause serious information loss and information leakage. Therefore, in order to ensure that the role and value of computer information processing technology can be effectively applied in all fields of society, we must pay more attention to the safety management of electronic information engineering, establish and improve various management guarantee mechanisms, and eliminate the impact of information security on communication quality as far as possible <sup>[6]</sup>.

### **3.3 Attach Great Importance to the Management of Information Sharing Stage**

For computer information technology and Internet technology, one of the significant advantages is that it can effectively achieve the goal of information sharing. The remarkable feature of the engineering development of computer information processing technology is that electronic information data resources have high sharing. In order to give full play to the role of this feature, both relevant government departments and professionals should ensure that the security management measures in the information sharing stage of computer information processing technology project are effectively implemented. In order to effectively achieve this goal, relevant departments should first create a more open and secure environment for electronic information sharing to ensure that users can carry out various data exchange and information sharing activities in a more secure space <sup>[7]</sup>.

## **4. Conclusion**

Through the flexible application of computer information processing technology, people's traditional lifestyle and work style can gradually develop in a more convenient and diversified direction, which has played a positive role in accelerating the development process of big data in China. Through the continuous reform and innovation of the development mode of computer information processing technology, it can help to further improve the comprehensive level of our

society. Therefore, we should not only clearly grasp the characteristics of computer information processing technology, but also correctly recognize and attach great importance to the significance of computer information processing technology in promoting the development process of big data in China, take diversified measures to continuously optimize and improve the application strategy of computer information technology, conduct in-depth analysis on the problems existing in the application process, clearly understand the causes of relevant problems, and use various effective ways to properly solve relevant problems, so as to ensure the continuous improvement of the informatization level of various industries.

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