

# A Discussion on the Application of Computer Software Technology in Big Data

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**Abstract:** We are now living in a new era of network, characterized by computer software technology and big data, each of which complement and influence the other. Focusing on computer software technology, this article will analyze the application direction of computer software technology in big data, and expound the relationship between computer software technology and big data, hoping that these discussion and analyses can better take advantage of the era characteristics of big data, and can contribute to effectively apply the computer software technology to practical operation, thus improving the efficiency and quality of people's work.

**Keywords:** Computer; Big Data; Software Technology; Relationship Analysis

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## 1. Introduction

Today is a new era of Internet, and the popularity and promotion of the Internet has brought more convenience for people's work, which greatly improved the efficiency and quality of people's work. In the era of big data, computer software technology can give a better play to the era advantages in practice operation. However, it will also bring great challenge and opportunities to the development of computer software technology. The effective application of computer software technology will not only have a great impact on the development of the computer technology, but also will benefit our era and social development, which should be taken seriously. And it is prior to clarify the relationship between computer software technology and big data if we want to further promote our era and social development through computer software technology.

### 1.2. The relationship between computer software technology and big data

Computer software technology refers to develop the function of computer software based on the platform of computer to meet the demand of people's daily life as well as material production demand. And big data refers to completing the collection management and analysis of information by using network, and capturing and processing the data through conventional software. If we want to better apply the computer software into practice to bring more convenience for people's life and optimize the way people work, it is necessary to take the advantage of big data to provide more data resources so as to complete data procession and analyses. As big data can provide more data base for the development and application of computer software technology and promote its practical operation, it will certainly bring great development opportunities and development spaces for computer software. It will greatly improve the practical effect of computer software and achieve more functional development when applying it into big data, thus promoting economic progress and the development of our era.

## 3. Emerging computer software technology under the background of big data

### 3.1 Virtual technology

The progress and development of computer technology have derived a series of technologies, which provide more security and convenience for people's work and life. And virtual technology is an important result of the development of computer software technology under the background of big data. Virtual technology can conduct data arrangement through the computer software and effectively converse the data into virtual resources according to the needs of users. What's more, it can better classify and conclude the data through the management analysis and research on virtual resources, thus improving the performance of computer software and application direction to further enhance the practical application of computer software.

### **3.2 Cloud storage technology**

In the era of big data, we are living under the torrent of information all the time. In such cases, everyone serves as both the receivers and maker of information. And tens of thousands of people produce a tremendous large amount of information every day, in which case people will need more information and data in their daily life. Therefore, it is obvious that traditional storage technology can hardly adapt to people's demand of data and information storage in the current stage. Meanwhile, traditional storage technology depend more on the hardware facilities, which leads to the ceiling and confines of traditional storage technology is relatively narrow. And the efficiency and security in the application is another critical problem that needs to take into consideration. Cloud storage technology can effectively solve this problem, which can store the information data in the Cloud through Internet. Under the background of cloud storage technology, the storage capacity of information data has been further improved, and the convenience has also been effectively improved at the same time. In addition, cloud storage technology can also better guarantee the security of information through password enhancement, which provides more convenience for people's life and work<sup>[1]</sup>.

### **3.3 Information security technology**

In the context of Internet era, people are sending information more and more frequent. As the popularity and promotion of the Internet has gradually permeated every corner of the people's work and life, in such cases, it will inevitably involve such problems as personal information and property and other related problems in their daily work and life. Thereby the information security is of critical significance to every people. Network is a double-edged sword, which will not only provide more convenience for people to create a more colorful world, but also will bring great risks for them at the same time. In this case, the information security technology has increased a lot. It can make people feel at ease when using Internet technology to protect people's personal privacy while reducing the potential hazards and disadvantages of the network through the information security technology. Through computer software technology, a more perfect and effective information security protection mechanism can be built from the perspectives of hardware, software, network and so on, so as to reduce security risks in the era of big data<sup>[2]</sup>.

## **4. The specific application of computer software technology in big data**

### **4.1 In commercial field**

In general, the development of science and technology is most widely used in the commercial field, which will better promote the development of business. So will the computer software technology. At this stage, the computer software technology has created great transformation in business, of which the most typical one is the e-commerce industry. E-commerce industry abandoned the traditional way of store marketing, which reduces the operating cost while providing more convenience for consumers to purchase through the computer network platform. Meanwhile, it pushes the accurate information to the people in need through the big data calculation, which also provides convenience for the marketing work and realizes the accurate identification of target customers. Under this circumstance, the enterprises can make targeted marketing strategies according to the target customer's consumption habits and gender, personal work as well as his location so as to maximize their profit<sup>[3]</sup>.

## 4.2 In communication field

The advent of the era of the Internet brings tremendous information to people, and also promotes the development of communication industry. With the promotion and popularity of network as well as people's increasing dependence on network, 5G network also gradually entered people's vision. It is the computer software technology that pushed the promotion and popularity of 5G network. With the development and further research of computer software technology, current network technology and communication become more and more convenient, and people can receive and pass the information in more diverse and casual way, no longer limited by time and place and form. At the same time, 5G network coverage area driven by the computer software technology is broader with faster information spreading. With the continuous development of computer software technology, China's Internet technology will continue to optimize and improve.

## 4.3 In enterprise information management system

The promotion and popularity of the network is not the only characteristics of our country, and it belongs to the characteristics of our age. In today's era, various countries have realized the promotion and popularity of the network, which largely solved the time and space problems in communication, gradually forming a world market. And the formation of world market brings in more and more resources, which also brings broader market for the enterprises. However, it will also bring more intensive competitions and greater operation risks for the enterprises. In this case, enterprises have to pay more attention to information management to capture more valued information so as to provide more guarantee and basis for the formulation of strategic objectives and strategic decision-making of enterprises<sup>[4]</sup>. With the advent of the era of big data, enterprises can receive more information and data for reference in the process of operation at the present stage. Through the effective identification, selection, calculation and analysis of computer software technology, the most scientific, effective and accurate data can be obtained. According to these data, enterprise leaders can estimate the operational risk in the process of enterprise operation, the capital return of project investment as well as the current actual situation of the enterprise, which will have an important impact on the improvement of enterprise competitiveness and the long-term development of the enterprise.

## 5. Conclusion

The Internet has brought great convenience for people's life and work, and the effective application of the computer software technology can better promote the development of the Internet era. Its most remarkable achievement is to play the advantages of the Internet and the special features of the data and information value maximally to promote the progress and development of our era, as well as the virtual technology, cloud storage technology and information security technology, which has played an important role in helping and influencing the current economic development and the way people work and live. In the future, computer software technology will further develop, and then promote the development of the era of big data, benefiting people's work and life in such fields as the commercial field, communication field, enterprise information management field and the forth..

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