Application Analysis Based on Computer Software Technology in Big Data Era

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Abstract. With the rapid development of the economy and the continuous development of Internet technology, China has entered the era of big data. In the era of big data, the application of computer software technology is more extensive and in-depth. This article is mainly from the following four aspects. First, a brief introduction to computer software technology and the era of big data; Second, the application of computer software technology in the next generation of big data; Third, the challenges that computer software technology needs to face in the era of big data; Fourth, in the era of big data considerations for using computer software technology. This paper briefly introduces and analyzes the application of computer software technology in the era of big data.

1. Introduction
Big data has become a major production factor in today's society and plays an important role in all walks of life. The processing and extraction of effective information from massive information has greatly improved the economic benefits of all walks of life.

2. A Brief Introduction to Computer Software Technology and the Era of Big Data
2.1. Basic Situation of Big Data
The famous McKinsey Consulting Company proposed the concept of big data in May 2011, marking the arrival of the era of big data. Big data refers to massive data, which is diverse in variety, large in data volume, and low in data density. The use of computer software to process and process big data can quickly extract valuable information from massive amounts of information. The current use of big data is mainly divided into the following three types. (1) Social platform data, mainly data that records the social behavior of users, after certain processing, feedback results, and so on. For example, WeChat, Weibo, qq, etc., which have a large number of domestic users. There are many similar software in foreign countries, such as ins, facebook and so on. (2) Traditional enterprise data, such as erp systems used by many companies, various financial systems, etc. to count and record data. (3) Sensor data, such as sensory records of industrial enterprise equipment, transaction data, etc. With the continuous development of computer network technology, the concept of big data has become more and more extensive, including all information such as numbers, texts, pictures, and videos. At the same time, the industries involved in big data are becoming more and more extensive, covering all current industries from communications, military, medical, equipment, education, transportation, etc. The use of big data can not only help companies to extract valuable information, but also help enterprises to provide data support when making decisions, and bring greater economic benefits to enterprises. For example, Wal-Mart companies use search engines to mine the texts and synonyms of their own websites, which makes Wal-Mart's online purchases increase by 10%-15%.
2.2. Basic Situation of Computer Software Technology

The computer is mainly composed of two parts, hardware equipment and software technology. Hardware devices are devices that can be viewed by host, display, mouse, keyboard, etc.; software technology mainly refers to programs, logic rules, data files, etc., and some data information that maintains the normal operation of the computer. Computer software technology is a major part of maintaining the normal operation of computing. At present, with the continuous development of the economy, people are increasingly demanding and using computers, and computer software technology will develop software programs that are useful to all walks of life according to different needs.

2.3. The necessity of application of computer software technology

The application of computer software technology to all walks of life not only improves work efficiency, but also greatly improves the accuracy and scientificity of work in the course of work. Informatization and modernization are also the trends in the development of various industries in China at this stage. With the development of technology, artificial intelligence technology will become more popular. In the whole artificial intelligence technology, the most core technology is computer software technology. Therefore, the essence of artificial intelligence technology is computing software technology, its development and application. It can not only accelerate China's economic development, but also increase the international influence of various industries in China. However, looking at the development of computer software technology in China at present, compared with developed countries such as Europe and the United States, the application of advanced technology is not wide enough, and high-end computer talents are very scarce. Therefore, for the industry, investment in computer technology research should be increased. At the same time, we must pay attention to the introduction of computer software technology talents.

3. The Application of Computer Software Technology in the Era of Big Data

Computer software technology has a short development time and a wide range of applications, and has achieved remarkable results. It is the development of computer software technology in China. Computer software technology plays an increasingly important role in the development of all walks of life. In order to better develop, many enterprises are also carrying out computer software research while using computer technology. Today, the development of computer software technology has entered the era of big data. The core of using big data technology is to find the required information through a certain number of rules and technical means in the massive data, and use and produce this information. In the era of big data, the following three technologies are the main technologies used by computers:

3.1. Virtualization Technology

Virtualization technology is a kind of computer resource management technology. It is a technology that converts some physical resources through technology transformation and abstraction in a better way for people to use better. By using virtualization technology, the efficiency of processing information can be improved, and the flexibility of user operations can be improved. At present, more and more enterprises and institutions are investing in the research and use of virtual technologies. The use of virtual technologies is not only in the use of computer technology, but also infiltrates into people's daily lives. Applying virtual technology to big data can not only drive the development of virtual technology through big data, but also improve the use and operation functions of virtual software. It can also optimize the use of big data technology through virtual technology. In short, the integration of big data technology and virtualization technology has a great beneficial effect on the research and development of both.

3.2. Cloud Storage Technology

Cloud storage technology is based on Internet technology and stores its own data on virtual servers of cloud service companies and organizations. At present, the popularity of cloud technology in China is already very high, and more and more enterprises and individuals are using cloud storage technology. Cloud storage technology spans the space and liberates the physical storage device. As long as the user has the network, the cloud storage information can be accessed, used and transmitted anytime and
anywhere. The convenience of cloud storage is the height that physical storage cannot reach. The cloud storage technology can also perform coordinated operations of other functions. For example, users can store information in the cloud network disk through cloud technology, and can quickly access the network disk when sending emails, and transmit the information in the network disk by email. The use of cloud storage technology in the era of big data can provide users with faster and more convenient services, and can process, classify and extract a large amount of information more scientifically.

3.3. Information Security Technology
With the support of Internet technology, using big data technology, you can find and discover subtle associations between various types of data through certain technologies and methods. These associations may be used by some people to cause information leakage or some other information to users. Aspect damage. Therefore, in the era of big data, it is particularly important to protect information security. Although China's Internet technology started late, information security technology has developed to a relatively high level. With the increasing use of big data technology, computer software technology and information security issues will certainly have more and more challenges. Therefore, it is necessary to continuously research and update data technologies to improve information security quality. To ensure the validity and authenticity of the data, bring more convenience to people.

4. The Challenges that Computer Software Technology Needs to Face in the Era of Big Data
With the development of the era of big data, the competition between industries is essentially the competition of computer software technology, so the industry is also strengthening the development and application of software technology, such as the further optimization of the computer technology environment, upgrading the computer The professional quality of the staff, through a certain commercial means to stimulate the work enthusiasm of the staff. The application of big data provides workers with more stable data in their work. With big data technology, the data acquisition, transmission and application of workers become faster and safer. However, there are certain defects, such as lack of in-depth understanding and application of computer technology, which leads to hindered development activities in the industry.

Computer software technology is being used more and more widely, which has brought tremendous influence and change to people's work and life. But the challenges that people should face in the use of computer software technology in the era of big data are not to be underestimated. First of all, in the era of big data, the amount of data is large and complicated, and data leakage is easy to occur in both storage and use. Second, some criminals will have some malicious attacks and purposeful stealing of information in order to achieve certain purposes. Therefore, in order to make better use of computer software technology in the era of big data, people must constantly research and update computer software technology so that they can cope with various challenges in time.

5. The Considerations in the Use of Computer Software Technology in the Era of Big Data

5.1. Strengthening the Layout in Information Communication
In the era of big data, a core aspect of the use of computer software technology is the layout of information communication, which is to better communicate and share data information to achieve maximum performance of the use of data information. In the process of implementing the information communication layout, it is necessary to study the corresponding information processing technology to meet the technical requirements of information transmission, and to improve transmission efficiency and transmission speed. Also need to pay attention to the economic benefits of information use.

5.2. Strengthening the Mining and Use of Data Information
In the era of big data, the development of computer software technology has a basic premise, that is, the mining and application of data information. In the process of mining data information, we must first clear the target content and task points, so as to ensure the accuracy of the data and the value of
the data, to avoid some invalid labor.

5.3. Paying Attention to the Choice of Computer Software Technology
Like other commodities, there are many software of the same type and function in the software market, but they seem to be the same, and there are still many differences in details. Therefore, when choosing computer software, people must clearly define their own needs and purposes, and choose products that are truly useful to them to avoid the impact of defective products on the efficiency of use.

6. Conclusion
In the era of big data, computer software has developed rapidly, and the social role it produces has become more and more extensive and larger. Although there are still some problems and hidden dangers in the use of computer software, but through the continuous research and evolution of people, the future computer technology will be more and more perfect, which will bring more convenience to people, to a greater extent. Improve social production efficiency.

7. References
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