Development and Application of Computer Software Based on the Background of Big Data Era

To cite this article: Wei Liu et al 2019 J. Phys.: Conf. Ser. 1314 012208

View the article online for updates and enhancements.
Development and Application of Computer Software Based on the Background of Big Data Era

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Abstract: With the rapid development of computer technology in the era of big data, this paper discusses the development and application of computer software. Firstly, it explains the definition of the era of big data, then analyses the development of computer software technology in China; finally, it discusses the specific application of computer software, and points out the main problems in the application process. The purpose is to provide some references for the development and utilization of computer software to ensure that computer technology can develop steadily in big data era.

1. Introduction:
As we all know, computer technology originated from the United States and started late in China. Nevertheless, in recent years, the development of computer technology, especially computer software, has developed rapidly. With the continuous expansion of information in modern society, people pay more and more attention to the era of big data, which provides a broad stage for the development and application of computer software technology. Without doubt, opportunities and challenges coexist. Therefore, if we want to remain invincible in the fierce social competition, it’s very important to strengthen the development and application of computer software.

2. A brief introduction to the big data era
With the continuous development of the times, human society has entered the era of big data. The so-called big data era, in fact, is to obtain a large number of data through certain technical processing, and apply a large number of data to social production and life technology. Big data itself is the number of data that cannot be processed by a large number of conventional processing modes, which can reach the level of 10TB and above PB. Therefore, the above criteria can be called big data. In fact, the continuous expansion of the total amount of data will make the carrier and processing work enter a new stage, which has a strong role in promoting the progress and development of human civilization. Certainly, the arrival of the big data era has also made tremendous changes in the traditional management mode and industrial development stage. We must learn to adapt to this change, otherwise we will be eliminated by the market.

3. Current situation of computer software development in China
Computer software technology originated in the United States at the earliest. It has broad application prospects. With the deepening of research in various countries, computer technology has entered a new application environment and development stage. In the 1990s, computer technology in our country has not been popularized, and even many areas have not laid a network, let alone the concept of big data. However, in just 20 years of development, China’s computer technology has also made rapid progress,
and gradually become an essential part of people’s daily production and life. With the application of computer technology, enterprises and individuals have begun to enrich their production structure or enhance the level of cultural entertainment. In data processing, some deep-seated developments need to adapt to various requirements, and big data technology is an important link. The development of modern information data also makes us pay more attention to the times and do a good job in stage design, which brings new challenges to our social life.

4. Application of computer software technology under the background of big data
The application of computer software technology needs to adapt to the characteristics of big data background, mainly reflected in the following aspects:

1. Safeguarding information security
   With the arrival of the era of big data, there are often strong links between different types of data, reflected in some negative aspects of data processing with a negative impact on subsequent processing. According to the requirements of technicians to do a good job of technical adjustment and management, this process also needs to choose scientific methods to manage, since the data system to enhance the overall level of security, eliminate the negative impact of various aspects. As an open interactive platform, it has a high degree of freedom, at the same time, it also has a large amount of information inside, which has the characteristics of high information storage and low density, besides, there may be some attacks, leading to viruses and Trojans attacking people. Big data itself can not be separated from the support and role of the Internet, so ensuring the security of the Internet is one of the most important problems to be solved in the current technological development. Compared with many developed countries in the West, the overall development of computer software technology in China is in the upper and middle reaches, but there are many problems, especially in the field of technical security. With the arrival of the era of big data, the adjustment of our business structure and the transformation of industrial production mode have brought new opportunities, and brought many new challenges. As for us, we should meet the challenges, face various problems and difficulties, and formulate reasonable and reliable strategies according to our own characteristics, so as to enhance security and stability, and further promote the industrial progress and commercial development of our country.

2. Cloud storage
   Cloud storage technology in computer software technology is currently widely used as a kind of technique, which has a wide range of applications in daily life. This is because cloud storage technology not only breaks the limitation of space, but also breaks the barrier of time, linking space and time, which effectively improves the interactive efficiency of storing information for us to view and find. In this process, the traditional storage mode can not be achieved and realized. In addition, the function of cloud storage itself is formed by combining individual storage units, so it can achieve the coordination of various functions to achieve efficient storage of information data. With the arrival of the era of big data, these technologies can bring us convenient use experience, and also can solve the problems of data processing and analysis, which are of great significance and value to play the function and advantages of big data.
3. Virtualization

Computer software technology needs to combine virtual resources to meet various environmental and management requirements, but also need to optimize and improve the configuration, which belongs to the internal information work. In fact, reasonable application of virtual technology to achieve the integration of internal resources is the key to improve the efficiency of information data processing, but also to achieve flexible data processing and operation. At this stage, virtualization technology occupies a very high proportion in enterprises and scientific research institutions, especially some technology itself has high commercial value, which will have a huge impact on people's food, clothing, housing and transportation. The application of virtual technology in big data can enhance the application value and practicability of data, and thus promote it from theory to practice. In the process of integration, the internal control of software can also be realized, and the structure and functions of software can be improved. In this way, the necessary conditions for the follow-up development can be provided through the innovation of related technologies, and the solid foundation for the application and development of social technology can also be laid.

5. Specific application of computer software technology under the background of big data

1. Business operation

With the rapid prosperity of socialist market economy, computer software technology has become very common at this stage. Reasonable application software technology can effectively improve the work efficiency of personnel, at the same time, it can realize the internal allocation and coordination of resources, thus giving full play to the value and function of work. These are of great significance to the progress and development of enterprises, and will also bring great competition space to the development of enterprises, so that they can occupy an invincible position in the fierce market competition, as well as continuously improving the overall competitiveness to meet the technical needs of the objective. In the different stages of technology application and development, the rationality of technology is very important for enterprises. Especially at the present stage, the number of Internet shops continues to grow. How to screen, summarize and explore customer information is an unavoidable problem. The needs of consumers shall be understood, so as to find the appropriate mode to adapt to the service. At the same time, it's needed to avoid some problems and risks in the competition, so as to maximize the provision of services and enhance competition to meet the requirements of commercial operation, which is also a problem that must be solved in the process of commercial operation.
2. Digital information teaching

Digital information teaching is an important way to apply computer software technology. At the present stage, the application level of computer software technology in China is still acceptable, but there are still many problems and shortcomings in technology innovation and application popularization. Therefore, strengthening college education and on-the-job training education is the prerequisite for the efficient application of computer software technology. In addition, multimedia education through informationization and digitization can also effectively avoid the limitations of space and time, thus expanding the audience of teaching, and realizing education adaptation and interest training in a broad sense. With the help of computers, many knowledge not contained in textbooks can be learned. At the same time, it can help students learn and live better, so as to enhance their enthusiasm and interest for learning. In daily teaching, computer software can be used to make knowledge to meet various environments and requirements. With the help of Internet answers and other ways, it can also help students understand the learning stage and environment, and better carry out the next learning work.

3. Business communication

Computer software technology also has many applications in the field of commercial communication. Predictive analysis based on IBMSPSS software can find the relevant content of information and effectively avoid the impact of unnecessary information, but also avoid damage. In addition, technical accuracy is also reflected in business analysis and the reliability, security and confidentiality of daily communications. At this stage, China Mobile Communications Corporation, China Unicom and China Telecom have begun to take the way of big data capture to understand users' interests and hobbies, so as to accurately locate, making the work more targeted.

4. Solution strategies of corporate information

Computer software technology also has a certain application value in enterprise information management, mainly embodied in providing information decision-making basis and strategy, realizing customer accurate positioning and analysis and other functions. Generally speaking, data collection can be summarized into two links: data sampling and data development. These two links are closely connected, which have important value for later data application and can be realized by means of computer software technology.

6. Challenges faced by computer software

The application of computer software technology needs to solve some objective and practical problems. With the development of the industry and the improvement of people's quality of life, China's economic development and daily life are affected at this stage. Computer software technology itself is an advanced technology, which will inevitably be affected and restricted by various aspects in
its application. Especially the influence of some destructive factors. In fact, with the explosive increase of data in the era of big data, many contents are huge, cumbersome and complex. Without good security management, it is easy to lead to the loss and leakage of stored data. In addition, the technical level of network hackers is also constantly improving, so computers may also be at risk of being attacked by hackers. In addition, for some technical application links, there are many problems that need to be overcome, which need to be perfected and remedied by technicians in order to solve in essence, and realized by means of technology.

7. Conclusion:
In a word, the arrival of big data era has brought unprecedented opportunities and challenges for the development and application of computer software technology, thus greatly improving people's life and working methods. Therefore, it is urgent to strengthen the development of computer software. It is necessary to seize the opportunity and face the challenge without fear; firmly seize the opportunity brought by the era of big data and strengthen the research and development of computer technology, in order to better apply to the operation of business and the processing of company information.

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