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Original Paper

Exploring the Application of Computer Science and Technology in the Context of Big Data

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Abstract

In recent years, with the advancement of computer technology, the IT industry has seen new opportunities. With the continuous development of information technology, computer technology and information technology are also changing. However, with the development of technology, the needs of users are also changing, which puts forward higher requirements for the development of computer technology. Therefore, how to apply computer technology to big data is an important problem that needs to be solved urgently. In the era of big data, the combination of information technology and people's work and life can greatly improve people's work efficiency and quality of life. Therefore, it is necessary for us to do some in-depth research on how to utilize computer technology to deal with a large amount of data. With the arrival of the big data era, the development of human society is more and more manifested in science and technology and informationization, as well as the mutual integration of information and industry.

Keywords

Big data, Computer, Science and technology

1. Introduction

In the environment of big data, the computer discipline has entered the ranks of rapid development and shows a thriving momentum. With the development of big data, there is no greater benefit than the computer industry, which provides a large amount of information, the development of technology, changes in demand, technological updates, service improvements and other information, which allows computers to be updated and improved when a service is not yet popular, and also shows the impact of communication between various industries on the development of computer science and technology, in the big data environment. Computer technology must undergo a change and technological innovation. In the big data environment, the development of computer science and technology will certainly also

appear a certain degree of decline, this is due to the development of information technology to a certain extent, the integration of information between the information data, the output and supply of a variety of information must be reviewed and analyzed in order to safeguard the risk of information data. To ensure that all data can be effectively utilized, it is necessary to conduct a detailed analysis of these issues to ensure that the data is accurate and efficient.

2. Background Analysis

Talent demand in the era of big data. How to face new challenges and opportunities in the new era and new stage, find new solutions and new transformation opportunities, complete the transcendence of key changes and realize the ultimate goal of the Chinese nation, this is an issue that every Chinese people, including every educator, need to consider carefully and put into concrete practice for it. And as the continuous output of higher education talents in higher education institutions, it is more important to think deeply about the issue and make appropriate reforms in line with the new era to do a good job in the specific work of talent supply. High-tech new materials, high-tech information technology industry, high-tech numerical control machine tools, high-tech intelligent robots, etc. are China's future focus on the development of the industry, the development of these industries will require a large number of emerging science and technology background of talents. Schools should make corresponding adjustments to the talent training program to adapt to the future development of the country. The specific transformation of these talent training programs, including the school of computer science and technology, network engineering, software engineering and other professional transformation of the direction and transformation of the content, to cultivate more adaptive to the development of today's society needs of the talents, and as the real goal of the transformation of talent training programs.

3. Opportunities and Challenges of Computer Science and Technology in Big Data Environment

At present, computer technology has been applied to various fields, although there are still some limitations in the processing of data, but under continuous improvement, better results have been achieved. For example, by analyzing a large amount of data, the overall level of enterprises can be comprehensively improved, communication between enterprises can be strengthened, and problems encountered by enterprises in their work can be reduced. In addition, it is also necessary to strengthen cooperation in all aspects to reduce the expenditure of manpower, material resources and capital, so as to ensure that enterprises are invincible in this dynamic market. For example, through information integration, it is possible to understand industry trends, market information, consumer preferences, and so on, which in turn provides a basis for one's planning. Therefore, it is crucial to maximize the development potential of information technology in the massive data. First of all, massive data puts forward higher requirements on storage technology, and users' demand for data is also increasing. In order to ensure the convenience of operation, users need to improve and optimize it. With the update of cell phones and the increase of broadband, a lot of data will be affected, so we have to keep searching

and learning these data. Secondly, the security of information is very important for users, if we can't guarantee the security of information, it is very important for users. In addition, it can better coordinate all aspects of work, save human, material and financial costs, and gain a foothold in the fierce market. Then, for example, through a large amount of data analysis, we can fully grasp the dynamics of the entire industry, access to market information, and then grasp the special preferences of customers, to reach the needs of customers, as a way to promote the sustainable development of the project. Therefore, it is very necessary to seize the development opportunities of information technology in the big data environment. First of all, the huge amount of data and information puts more and more demands on the storage technology, and it will be more and more demanded by the users. Improvements and optimizations are necessary to ensure the users' experience. For example, the upgrading of equipment and network broadband will have some impact on big data, which requires us to continue to explore and research. Before processing the data, it is necessary to carry out preliminary processing of the collected data, that is, to classify and summarize the collected information. In the field of information processing, a single technology is usually used to process the data, and the result is not obvious, the reason is that the quality of its hardware is not high, and there will be some limitations. In the current era of big data, big data technology can effectively solve the shortcomings of the existing technology and utilize its own advantages, which can both accelerate the processing of information and greatly improve the efficiency of information processing.

4. Characteristics of Big Data

In the course of the development of big data information, it shows extremely crucial attributes. One of the most crucial is the convenience and efficiency of big data information, which enables people to obtain a large amount of useful information in a short period of time. Big data not only has rich data content, it also provides a more convenient way for people to quickly find the information they need. Therefore, in the current social development, big data is a very valuable technology, which can bring great economic and social benefits. Along with the continuous growth of big data and information data, the number of many computer applications in practical use has also risen. Therefore, big data technology has gradually become a new technology that is more popular in the current society. Computer equipment is not only the core information carrier of big data, but also plays a vital role in the progress of big data. The use of big data technology makes the computer in the working process, can effectively integrate the information data with the actual needs. In the field of information processing of big data, technical experts can quickly carry out in-depth exploration and research on these data when integrating and analyzing data information. Therefore, for the development of computer software, it is important to focus on the processing technology of big data and improve the efficiency of software development so as to meet the development of social economy. In the evolution of the big data era, the sharing of network platforms has become a trend, and these platforms further deepen the interaction and communication between data and information. At the same time, the

network also generates a large amount of data information, which is shared to a certain extent and is very rich. Therefore, users are able to use the network as a platform to obtain the required data and information in an all-round way. In this case, on the relevant personnel to do a good job in the application of big data information technology. In our country, the traditional data and information in its development history, mainly through the form of text and images to expand. In order to more effectively meet the diversified needs of users, the era of big data information in its continuous development at the same time, also provides the public with richer and more diverse data and information resources. This not only provides more technical means for video dissemination, but also significantly improves its efficiency in processing information data.

5. The Development Process of Big Data

The current big data and technology has reached a new height, which brings new opportunities to the development of computers, but also brings new challenges, which requires the industry's core staff to respond in a timely manner. For example: the risks and dangers of technological development not integrating with the big data era, the brain drain of core technical staff, and the lack of technological feedback must be guarded against. Of course, in the world of big data, computer science and technology, because of its own development characteristics and performance, must be constantly upgraded to ensure that the application of computer science and technology to adapt to the needs of society and talent, and to maintain a steady upward trend. The practice of teaching methods. In the teaching process, it is necessary to pay more attention to the degree of students' acquisition of knowledge. In the traditional teaching process in the past, it is usually the teacher's narration of the classroom content, and then the students accept the classroom content. In such a teaching process, students are passive subjects, and it is difficult to effectively utilize their full creativity. Such a teaching mode obviously wastes the independent creative ability of students and does not meet the requirements of the current era of development. In the teaching process of big data related content, teachers should adopt the model of flipped classroom. The currently used flipped classroom education platform is the MOOC platform, through which the platform can realize the classroom flip, the students can become the teacher of the class, and the teacher can also become the students of the class. This can fully improve the students' sense of independent learning. Moreover, in the process of flipped classroom teaching, teachers should also pay attention to the full communication with students, and should also pay attention to the appropriate guidance to the students to actively think, and complete the active exploration of the relevant content. So as to cultivate talents who are truly conducive to the development of the times and have a high degree of mastery of big data and other technologies. In the teaching of the flipped classroom, the teacher first needs to set up the specific content of the class before the class, as well as the learning group of this class. According to the actual content of the course to clarify the specific role of the students, complete the cooperation between the students, improve the students' participation in the course in advance. Then you can also use the flipped platform

to understand the students' preparation for the lesson, and complete the adjustment of the lesson according to the students' specific preparation progress.

6. Computer Science Applications in the Context of Big Data Information

6.1 Applications in Science

For the first time in the history of computer development, this technology was introduced into several scientific research projects. As an emerging discipline, computer science is a cross-cutting and emerging discipline that consists of three major sciences: mathematics, physics and chemistry. In research projects, computer science is mainly used in the following areas: data collection and integration, storage of data and information, retrieval of data and information, sharing of information, computation and analysis of data, and automatic control of systems. Computer technology is a very important tool in scientific research projects and its importance cannot be overstated. When you apply computer science in certain scientific research projects, you can rely mainly on the large capacity and fast computing power of computers to enhance the efficiency and quality of data and information processing. As the level of scientific and technological development continues to increase, it places higher demands on researchers. It has the ability to solve numerous computational challenges in scientific research projects, and traditional manual computational methods do not provide effective solutions in this regard. The computer can quickly and accurately process a large number of complex data files, and automatically classify, compress and manage them, greatly improving the efficiency of scientific research work. Therefore, in many scientific research fields, part of the computer technology is applied to the collection of data, which greatly improves the efficiency of the implementation of project research.

6.2 The Use of Intrusion Detection Technology

Intrusion detection technology is a method specialized in detecting behaviors such as malicious access or data theft, and through the application of this technology, it is possible to carry out a comprehensive and systematic inspection of the network in order to promptly identify any abnormal conditions that may occur during the operation of the system. The intrusion detection system is mainly divided into two parts, one of which is the security defense system and the other part is the attack protection system. Once anomalies are detected, the system will automatically report them and handle these anomalies accordingly. Common anomalies include intrusion behaviors such as exceeding privilege to access the system or corrupting system data. Therefore, intrusion detection technology is widely used in the field of network security, playing an important role in ensuring the security of network systems. At present, intrusion detection technology has undergone a series of innovations, including the application of expert systems and neural network technology, which can effectively monitor and analyze various activities of users and systems; the system structure and problems of the local area network are reviewed in detail; attacks are identified and alerts are sent to the management; for abnormal behavioral patterns, statistical analyses of the datasets are conducted and the regularity of the data was explored;

the critical systems and data integrity in the LAN were comprehensively evaluated.

6.3 Improve the Computer Science and Technology System

With the continuous progress of China in the field of computer science and technology, the professionals related to this have also realized continuous enhancement in their ability. At present, people's quality of life continues to improve, computer technology has become an important force for social progress and economic development. In the current context, in order to better synchronize with the times, first pay close attention to the application and development trend of computer science and technology. At present, most areas in China have a certain degree of information security threat factors, seriously affecting people's normal life as well as social stability, so it is necessary and urgent to strengthen the management of computer science and technology is a necessary and urgent part of the work. From the perspective of medical institutions, in order to better synchronize with the modern society, hospitals to optimize the application of computer science and technology system, the establishment of a scientific and reasonable structure, and continue to improve and innovate. By regulating the behavior of relevant staff, can avoid computer technology "off track", to ensure that in the process of continuous innovation in computer technology, there will be no security risks. At the same time, we should also strengthen the management and control of computer network technology, to ensure the quality of information transmission, enhance network operation security. In the scientific and technological system of "guardianship", but also significantly reduce the network security risks.

7. Conclusion

This paper addresses the specific needs of the current big data background of the new capabilities of the talents proposed how to meet the problem, through the computer science and technology majors in how to more effectively complete the big data professional knowledge training, talent education and other issues of the discussion, pointed out that the new teaching methodology, the new way of teaching reform, as well as in the future for the new opportunities for the cultivation of talents under the way to provide some suggestions and directions. With the continuous emergence of big data, both in the information age and in the era of computer development, has brought new needs for the development of information technology. For example, the development of technology does not need to be combined with this era of information explosion, and there is no need to worry about the loss of talents and the lack of technical information. The so-called virtualization technology basically relies on virtual resources for data management, and while doing so, it can also make the best configuration of the virtual resources. Using virtualization technology, it can improve both the processing speed of the data and the flexibility of a specific operation. From the current situation, virtual technology has become a hot spot of concern for the major scientific research institutes, and in the future, its popularity will become more and more widespread.

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