Analysis and research of computer application technology based on big data background

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Abstract: With the support of the rapid development of science and technology, computer application technology has made remarkable achievements, which has laid a solid foundation for the development of various social affairs. This paper will take this as the background, the computer application technology under the background of big data analysis and research, explore its development trend and development strategy, in order to provide support for promoting computer application technology, improve the effectiveness and quality of application, and lay a solid foundation for building a modern society.

Key words: Big data background; Computer; Applied technology

Introduction: Due to the network virtualization operation mode, it will cause a huge load on the computer physical server, so it is necessary to update the equipment and related computer parameters in time, so as to meet the information processing requirements of large-scale computer network environment and improve the quality of practical application. Computer application technology has obviously improved the efficiency of the use of information resources, the value of the data itself has been deeply mined, according to the service characteristics of different types of data, corresponding countermeasures are taken to ensure that the data information can truly reflect the characteristics of various applications, the establishment of reliable data chain, to meet the development speed of computer application technology in the new era.

I. Analysis of computer application technology based on big data background

1. Processing massive information data

Based on the current big data environment, different types of information need to be collected through computers. In order to effectively improve the accuracy and efficiency of information collection, it is necessary to supervise the generation of information. During the supervision period, the information generated by users should be included in the database for timely integration and processing. When using computer information collection technology, the quality of information collection should be guaranteed. The quality of data collection is directly related to the value of the data, only the objective and fair evaluation of the data, the value of the data can be guaranteed. For example, when acquiring a video, you can add dimensions such as publisher, release time, release media, number of likes, number of comments, etc., to facilitate the rapid analysis of the video by using graph database and other technologies in the future. For the analysis of the collected data, there is a correlation between the data, the data can be classified and stored in a unified manner, but also convenient for deep analysis, improve the accuracy of data analysis. Through the data transmission technology, the processed data is directly sent to the user, and then the data is transmitted. The use of computer information storage technology, can be timely and safely processed information stored, mainly the use of a special database for storage, can meet the user's query needs at any time, because the amount of information generated in daily life is very large, so it is necessary to optimize it to improve its retrieval efficiency.

2. Ensure daily communication and exchange

In the current big data environment, the application range of computer technology has been further expanded, such as the application in the field of communication, the use of computer-specific analysis software to provide enterprises with accurate data, improve the autonomy of enterprises on user resources, and strengthen the maintenance of users. Taking XO technology as an example, applying XO technology to information communication can analyze a large amount of information and data, so as to predict the user's behavior and guide the company's product research and development and business development direction. China Unicom, China Mobile and China Telecom, the three major telecom operators, have carried out a number of services in China's telecom system, and achieved fruitful results. In the environment of big data, the use of computer software technology can effectively collect user information. For example, by analyzing the user's consumption direction and preferences and other information, enterprises can make strategic plans according to the actual needs of users and provide targeted services for users.

3. Computer information security in a big data environment

In the era of big data, it is crucial to ensure computer information security. First of all, we need to ensure the security of information content and prevent information leakage and destruction. Information leakage may lead to personal privacy being stolen, which will have a serious impact on users. And information damage may be caused by system infection with viruses or malware. Secondly, management security is also crucial. Scientific and reasonable management measures must be taken to avoid security problems caused by operational errors and mismanagement. In addition, physical security should also be taken into account, network engineering should be reasonably planned, hardware equipment should have anti-interference and anti-fire capabilities. Finally, it is necessary to establish a sound information security protection system. At present, many networks lack information security protection system, which leads to frequent network infection virus and information leakage, and even leads to the whole system breakdown. Therefore, we need to strengthen the awareness of information security and establish a comprehensive information security system to cope with the security challenges in the big data

environment.

II. The development trend of computer application technology based on big data background

1. Intelligence

Artificial intelligence is a kind of intelligent computer based on modern science and technology, with learning, reasoning and other functions, and is a container carrying human wisdom. It can simulate human thoughts, analyze information and make accurate judgments, thus expanding human intelligence. At present, artificial intelligence has penetrated into people's lives and exerted a great influence on people's lives. For example, Apple's Siri intelligent voice assistant can help users send text messages, make phone calls and even talk with users. With the development of artificial intelligence technology, it will be more and more applied to various fields, which requires a great deal of computer technology, big data technology, psychology and so on. In short, in order to meet the growing needs of human beings, it is the general trend for computer application technology to develop in the direction of intelligence.

2. Networking

With the rapid development of network technology today, the combination of computer and network technology is increasingly close. Under the background of big data, the network of computer application technology promotes the rapid development of communication technology. In daily learning and entertainment activities, people can find information and obtain resources through the network to meet the needs of life, entertainment and other aspects. In the future, the computer application technology should be based on the traditional communication technology, combining Bluetooth technology and network technology to form a new network system, expanding the distance of communication, speeding up the transmission rate of information, so as to achieve the sharing of network resources. Users can access the Internet through wireless terminals, freely make use of massive Internet resources, real-time access to information on the Internet. The popularization of computer and Internet makes computer application technology gradually accepted by users, and also provides favorable conditions for the development of computer application technology network. At the same time, the Internet also provides a broader platform for the development of computer application technology, so that the application value of computer application technology is more prominent.

3. Popularization

Computing application technology serves the masses of people, so popularization is the inevitable direction of its development. In today's computer products are more and more common, the dependence on computer products is more and more strong, and the popularization of computer application technology is more and more obvious. In daily life, smart home appliances, smart phones and so on are popular computer products. The popularization of computer application technology makes people's life more convenient and fast. For example, smart TVS will automatically push programs to users that suit their preferences, while smart refrigerators will adjust the temperature according to the frozen state of food, thus improving the quality of human life. In order to make the rapid popularization of computer application technology, it is necessary to carry out market research, master the needs of users, organically combine the production of computer products with the application of computer technology, and provide high quality, multi-functional and popular computer products. At the same time, practitioners should also do a good job of corresponding technology research and development work, to provide necessary support for the popularization of computer application technology.

III. The development strategy of computer application technology based on big data background

1. Increase government support

The government has given strong guarantee to the development of computer application technology. The state should give more support to computer application technology to ensure its development. The concrete can be started from the following points: first, technical support funds. The state shall set up special funds to support the research of the information industry so as to ensure the healthy development of the information industry. Some financial support should be given to enterprises with high scientific and technological content, so as to stimulate their enthusiasm for scientific research and promote their further research and application of computer technology. Second, the legal aspect. In order to ensure the healthy development of the computer market, the government should formulate corresponding laws and regulations according to the actual situation of the market, so as to ensure the normal operation of the computer market and prevent the phenomenon of monopoly and unfair competition. The government should actively guide enterprises to use legal means to safeguard their legitimate rights and interests, and promote the healthy development of computer technology. Enterprises that violate laws and regulations should be dealt with seriously, set up a "negative example", and promote the orderly development of computer application technology in law.

2. Speed up the training of computer talents

The development of computer application technology requires specialized computer professionals. The government, enterprises and schools should work together to provide the necessary personnel guarantee for the development of computer science. At the government level, the government should strengthen the training of computer technicians, and establish the corresponding reward system, improve the enthusiasm of computer technicians, and actively devote themselves to the research of computer application technology. On this basis, we should pay more attention to the life and work of outstanding talents, ensure their quality of life and prevent their outflow. Standing on the level of enterprises, we should increase the training of talents, and seize the work of talent training. Enterprises can invite experts in the field of computer application technology to teach, or hold technical exchange meetings in the company, so that employees have more understanding of the use of computers. At the school level, practical classes should be set up, through the form of simulated classes and internships, so that students have a deeper understanding of the use and use of computers, so as to accelerate their growth.

3. Enterprises focus on technological innovation

The independent innovation ability of enterprises has a great impact on the development of computer application science and technology. Under the background of big data, enterprises must innovate if they want to seize the market on the Internet, enhance their competitiveness and obtain more economic benefits. At the same time, enterprises should also innovate the function of the product, according to the actual needs of users, carry out diversified product design, enhance the practicality of the product and enhance the user's good impression. The enterprise may formulate a set of systematic reform plans to guide scientific and technological workers to carry out research on computer applications, and apply computer technology to the work process to improve work efficiency; To realize the company's automatic office and promote the company's information construction. For those employees who take the initiative to use computer technology, appropriate incentive measures can be taken to stimulate their enthusiasm for work, play an example role for other employees to set an example.

4. Optimization and innovation of computer application technology education in colleges and universities

As the cradle of talent reserve, colleges and universities should optimize the courses of computer application technology, as follows: First, update the teaching content. In the era of big data, the content and requirements of computer application technology are constantly updated, so it is necessary to constantly update the teaching content to ensure that students can master the latest knowledge and skills; Second, the introduction of practical links. In order to improve students' practical operation ability, practical links can be introduced into the course, through experiments, projects and other ways to let students hands-on operation, deepen the understanding of knowledge; Third, innovate teaching methods. A variety of teaching methods can be adopted, such as case teaching method, project teaching method, etc., to stimulate students' interest in learning and improve teaching effect; Fourth, construction of teaching resources. We can build a teaching resource library, including courseware, cases, experiment instructions, etc., to facilitate students' study and reference; Fifth, strengthen teacher training. In order to improve the teaching level of teachers, colleges and universities strengthen the training of teachers, so that teachers can master the latest knowledge and skills, and improve the teaching quality; Sixth, the feedback mechanism should be established. Establish a feedback mechanism for students, learn about students' learning situation in time, and improve and optimize teaching.

Epilogue

All in all, in the context of big data, computer application technology has broad prospects for development. It can well realize the innovation and development of science and technology, and promote its development and application in various industries. For enterprises and institutions, seize the huge development opportunities in the era of big data, and take it as an important way and method for the growth of enterprises and institutions, technological progress and market expansion.

References:

[1] Bihong Lin. Analysis and Development of computer Application technology in Big Data environment [J]. Industry and Technology Forum,202,21(14):34-35.

[2] Yanchi Jia,Meng Sun. Analysis of computer information processing technology under the background of Big Data [J]. China New Communications,2019,21(17):119.

[3] Xiaoluo Zhang,Qianqian Liang. Analysis and development of Computer application technology in Big Data environment [J]. Information and Computer (Theoretical Edition),2023,35(06):43-45.

[4] Songtao Li. Development Analysis of Computer Application Technology Based on Big Data Background [J]. East China Science and Technology,2022,(10):66-68.