

Effective Application of Computer Science in the Background of Big Data Era

Sun Yan

Department of Journalism and Communication, Liaoning Communication University,
Shenyang City, Liaoning Province, 110000, China

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Abstract: The era of big data has subverted the development mode of many fields. The development of information age has greatly promoted the infiltration of big data into people's production and life. Computer science has also been developed more rapidly and applied in many industries. While rationally utilizing the characteristics of big data and computer technology, comprehensively mastering various technologies such as data analysis and data mining, and actively integrating computer science can promote the effective application of computer science.

1. Introduction

Nowadays, Internet and mobile Internet technologies have been widely used, and data generation is an indispensable part of daily life. Big data technology can handle a lot of valuable data information, but it also takes a lot of pressure. Computer science and technology has a very positive role in the development of society, but in the process of development of many industries, it must also cope with greater pressure, technology itself needs continuous improvement and improvement. In addition, it is necessary to fully integrate the basic needs of the market in the development and train more high-quality professional talents.

2. Overview of Big Data

2.1 The concept of Big Data

Large data has greatly changed the traditional data transmission and processing mode, and formed a new development mode. Big data can integrate and optimize data well, and promote the scientific and rational allocation of resources. It is a very important information asset. Not only that, but also big data has a very significant advantage over the traditional model, which can ensure the rational allocation of information resources. It can be said that there are very obvious advantages in the development of big data, and its diversity is stronger, which promotes the construction and development of informatization. From a popular point of view, it fundamentally transforms the traditional way of information transmission, effectively dealing with data that cannot be processed by traditional models. Many schools currently offer courses related to big data. This development background provides good conditions for data integration and analysis, which makes big data technology more widely used.

2.2 The characteristics of big data

The characteristics of big data are very obvious, the amount of data is huge, the data query speed is fast, and the information diversity is strong. In addition, the large amount of big data data is also an important manifestation of expanding computer information. Similarly, computer information technology is also evolving, and the types of computer information technology are also increasing. The amount of large data information is amazing, and the speed of searching is relatively fast. Because a lot of data information is running at a high speed, if we want to filter out more valuable information, we should speed up the speed of data information collation. At present, the speed of data and information transportation, update and change is accelerating.

Another feature of big data is significant complexity. In the process of information processing, large data can deal with many kinds of information content, such as text, web pages and pictures,

and the data format has obvious diversity. The format of data processing often changes, which not only improves the level of data processing, but also increases the difficulty of computer information processing.

3. Opportunities and Challenges of Computer Science in the Age of Big Data

3.1 Opportunities in the Age of Big Data

Nowadays, computer networks have been widely used in many fields of social production and life. At the same time, the amount of data information has also increased significantly. This is also a very important content and link in large data information processing. Massive information processing is more difficult, but in order to ensure the quality and effect of processing, we should constantly try new data processing methods, and its role is also very ideal. For example, computer technology is commonly used in current enterprise management. In the process of scientific application of this technology, relevant personnel need to improve work quality and work efficiency, and reduce the cost of business operations.

The application of computer science and technology has greatly enhanced the comprehensive strength and market competitiveness of enterprise development. In the field of computer science education and teaching, keeping pace with the development of the big data era has become the main goal of teaching, and it has become the first criterion for selecting teaching content, which effectively mobilizes students' enthusiasm for learning. Teachers can choose different teaching methods and contents according to students' advantages and characteristics. In the business competition, the application of computer science can also take the personal preferences of consumers as the entry point, and on this basis, make full use of big data for people to create products more in line with their requirements, thereby effectively increasing business value and economic profits.

3.2 Challenges of Computer Science and Technology in the Age of Big Data

In the context of the development of the era of big data, it has effectively promoted the organic integration of the enterprise, business and education industries. It not only fully complies with the planning and strategy of national development, but also brings many challenges to social construction and development.

First, today, with the continuous development of big data, it has become an important way to promote the full integration of the business, business and education industries. At present, information technology, storage space and data transmission are also facing many problems, which are related to computer science and technology. Therefore, it has become the focus of people's attention, and it has also become the focus of the development of education and business.

Secondly, with the rapid development of big data, computer information technology should strengthen the protection of enterprise and personal privacy. People can use computer science technology to achieve online shopping and enjoy high-quality services. And online sales model is developing faster and faster, which also provides many conveniences for illegal elements. To properly apply big data information technology, it is necessary to carefully and comprehensively analyze corporate consumption behavior, and in the analysis of business behavior also increase the risk of corporate information leakage. For this kind of risk, the staff needs to take effective measures to continuously deepen the safety awareness and risk prevention awareness of the technology users, so that they can always be highly vigilant and avoid providing the criminals with the opportunity to commit wrongdoing.

Finally, in the context of the big data era, the application of computer science has also made it necessary for network providers to cope with many challenges. This requires relevant personnel to actively take effective measures to continuously enhance the processing power of big data information. In addition, computer science faces the challenge of extracting valuable information. Big data information flow has high value, but if we want to give full play to the role of big data, we need to make more efforts on the basis of existing, which also creates a huge obstacle for the rapid

development of computer science and technology.

4. Application of Computer Science in the Age of Big Data

4.1 Application of Multimedia Technology

With the continuous development of big data technology, computer multimedia technology can also realize the comprehensive transmission of image, sound and other information under the support of computer science and technology. In order to promote enterprise construction and development in a more abundant way, more direct access to detailed information on goods and services. In the context of the big data era, face-to-face communication is no longer the mainstream. Enterprise employees in different regions can also use video conferencing to achieve remote meetings.

4.2 Application of Cloud Storage Technology

Nowadays, the number of computer network users in China has increased significantly, and it has also produced a very significant impact. Among them, the amount of data storage increases, which is also an important manifestation of the continuous development and expansion of network storage system. Previous technologies can not solve these problems, but the emergence of cloud technology can solve these problems in a timely and effective manner. Cloud technology is actually a technical entity, which is mainly composed of more storage units, but this entity is a collection of multiple technologies and multiple functions. In everyday applications, data storage and data mining technologies can be used to process data at high speed. At the same time, it can also greatly meet the basic requirements of users, and actively coordinate multiple servers in order to store more data. Furthermore, computer cloud storage technology can effectively solve the problem of massive information storage and improve the quality and efficiency of data information processing.

4.3 Application of virtualization technology

Computer virtualization technology has significant advantages in applications, so it also occupies a very important position in computer science. Computer hardware equipment is constantly improving, and computer software equipment can be more fully applied. The virtualization technology fully integrates the computer data information, functions and storage and other aspects of the configuration. The application of this technology can improve the scientificity and rationality of large data resource allocation and effectively solve the problem of insufficient memory. In a word, in the development of big data era, computer science and technology has been developing and perfecting continuously, and has also exerted a tremendous influence in the scientific and technological circles. Enterprises and individuals need to correctly understand the characteristics of computer science. In order to correctly use computer science and technology to guide work and life.

5. Application Strategy of Computer Science in Big Data Era

Nowadays, digital information has become an important trend of development. It also provides a favorable space for the development of big data technology. Computer science and technology can also develop in a more advanced direction. Effective improvement measures to continuously improve the professional level of technical personnel.

5.1 Develop special training technology

Technicians must constantly change their understanding of computer science and technology, and more fully understand the advantages and characteristics of computer science and technology. In addition, in the process of applying computer science and technology, it is necessary to actively integrate relevant content. For example, technical personnel can be regularly trained to popularize the basic knowledge and practical skills of Computer Science in the training work. In training, we should strengthen guidance. On the one hand, computer science and technology should cultivate and shape the inherent character of professional and technical personnel, on the other hand, it can

also effectively purify the computer industry.

5.2 Strengthening the Research of Computer Technology

In the development process of the big data era, we should fully integrate the current development reality, take the basic needs of different posts as a foothold, and excavate the post needs more comprehensively and deeply. Thus, a more perfect training system and training principles are formed, which fully reflects the pertinence of computer science and technology training. Therefore, we must constantly strengthen the research and analysis of computer technology.

5.3 Perfecting Market Investigation and Assessment

Staff members should carefully analyze the application status of computer science and technology in different fields, and summarize the shortcomings and problems in the development of technology. In order to better grasp the trend of market development, it also greatly promotes the effective application of computer science and technology in many fields.

6. Training Strategy of Computer Science Talents in Big Data Era

6.1 Talents needed in the era of big data

After the professionals analyzed the actual needs of the talent market at this stage, the following points were obtained:

Based on a comprehensive analysis of the current talent market needs, professionals have come to a more systematic conclusion. From a technical point of view, most companies pay more attention to IT, systems and hardware, and also have high hopes for it. This is also the basic demand for talents in the current market development process. The era of big data is also an important prerequisite for the development of computer information technology. On this basis, the talents in the field of computer science also have very strong skills and rich professional knowledge. Talents always have very significant advantages in processing technology. In addition, professional and technical personnel should fully understand and master the basic algorithm of data, and complete data analysis and settlement work in accordance with job requirements. At the same time, computer science practitioners need to have strong psychological quality and stress resistance, which is the need of team development. On the other hand, it is also the requirement of the development of market economy for talents.

6.2 Talent Training Target Based on Big Data Era

The education of computer science and technology is a very important development direction in personnel training, not only that, but also the basic trend of education development under the background of big data era. Computer science and technology play an important role in the development of big data technology. It can become an important opportunity and carrier in the development of big data technology. If professional technicians can fully understand and master computer science and technology, they can apply big data technology more skillfully. Not only that, but also a wealth of experience in the application. Big data is handled by massive data, and based on theoretical knowledge in the process of talent cultivation, the multidisciplinary cross-operational model is fully launched. Therefore, it will provide more talents with strong professional ability and high comprehensive quality for the society.

7. Conclusion

At present, we have entered the era of big data in an all-round way, and the era of big data has fully met the basic requirements of people's daily work and life. It can be said that the development of computer science and technology better shows the characteristics of the era of big data. In the process of technological innovation and development, although many difficulties need to be dealt with, professional and technical personnel still need to have sufficient confidence and courage to continuously push forward computer science and technology.

References

- [1] Wang Shuobeng. Thoughts on the Application of Computer Technology in the Big Data Era [J]. Computer Products and Circulation. 2019 (01)
- [2] Wei Haozhi. Application of Computer Science in the Age of Big Data Information [J]. Electronic Technology and Software Engineering. 2018 (09)
- [3] Luo Gong. A Brief Talk on Computer Information Processing Technology in the Age of Big Data [J]. Modern Information Technology. 2017 (06)
- [4] Yang Huihuang. On the Present Situation and Development Trend of Computer Science in the Background of Big Data [J]. Digital Communication World. 2018 (12)
- [5] He Haolan. The development of information and computer science and its application in various fields [J]. Information Recording Materials. 2018 (12)
- [6] Bian Hangfeng. Application and Development Trend of Computer Science and Technology [J]. Electronic Technology and Software Engineering. 2019 (02)