



Computer Application Status Quo and Computer Development Trend

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How to cite this paper: Tengfei Han. (2023) Computer Application Status Quo and Computer Development Trend. *Advances in Computer and Communication*, 4(3), 177-180. DOI: 10.26855/acc.2023.06.014

Received: May 30, 2023

Accepted: June 28, 2023

Published: July 24, 2023

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Abstract

As an important tool and technology in modern society, computer has penetrated into all aspects of all walks of life, and has had a profound impact on human society. With the continuous progress of science and technology and the promotion of innovation, the current situation of computer application is also constantly evolving, and the development trend of computer also presents a new look. First, the application of computers in enterprise management has become increasingly widespread. With the advancement of informatization, enterprises are more and more dependent on computer systems in production, sales, human resource management and other aspects. Enterprises can realize the optimization of the production process, product quality monitoring, the analysis of sales data through the computer, and improve the production efficiency and management level. At the same time, the application of computers in finance, logistics, marketing and other fields also enables enterprises to better grasp the market information, optimize the allocation of resources, and enhance their competitiveness. Secondly, computers play an important role in the field of scientific research. Scientists use computers to conduct large-scale data processing, complex simulation, scientific computing and so on, promoting the development of scientific research. The application of computers in biomedicine, climate prediction, cosmic exploration and other fields not only accelerates the process of scientific discovery, but also brings more scientific and technological innovation and application to the human society. This paper analyzes the current situation of computer application, and analyzes the development trend of computer.

Keywords

Computer application, computer development, technology application

Introduction

As an advanced information technology, computer is widely used in various fields, and has had a profound impact on social economy and human life. With the continuous progress of science and technology and the promotion of innovation, the status quo and development trend of computer application are also constantly evolving. Understanding the current situation and development trend of computer application is of great theoretical and practical significance to deeply study the development direction of computer technology and promote the progress of computer technology in practical application. First, understanding the current situation of computer application can help us to deeply understand the application of computer technology in different fields, including enterprise management, scientific research, healthcare, health care, education and training, etc. Through the research of the computer application status, the application scenarios, application effects and existing problems and challenges in different fields can be found, so as to provide reference for the future research and application. Secondly, understanding the de-

velopment trend of computer helps us to grasp the development direction and trend of computer technology, so as to predict the future development path and application direction of computer technology. The continuous innovation and evolution of computer technology, such as artificial intelligence, big data, the Internet of Things and other technologies, has had a profound impact on the development of computer application and industry. Understanding the development trend of computer can help us realize the potential application and development opportunities of computer technology, so as to guide scientific research and practical activities. In addition, deeply studying the current situation and development trend of computer application is of great practical significance to promote the practical application and promotion of computer technology. Understanding the current situation of computer application can help us to identify the advantages and disadvantages of computer technology in practical application, so as to provide reference for solving practical problems and improving the application scheme. Understanding the development trend of computer can guide the decision-making and planning of industry, government and scientific research institutions, and promote the promotion and implementation of computer technology in practical application [1].

1. Current status of computer application

1.1 Application in the enterprise management field

In the field of enterprise management, the current situation of computer application is increasingly mature and widely used. With the development of informatization and digitalization, enterprises rely on the support of computer technology in production, sales, human resources, finance and other aspects, so as to improve the management efficiency, reduce the cost and enhance the competitiveness of enterprises. First of all, in terms of production management, the current situation of computer application enables enterprises to realize the automation and digitalization of the production process. For example, computer-aided design and manufacturing (CAD / CAM) technology can help companies design and optimize their products to improve product quality and productivity. Production planning and control (ERP) system can help enterprises to conduct production planning and material management, and realize the reasonable allocation of production resources and real-time monitoring of production schedule. Digital manufacturing technologies, such as the Internet of Things, cloud computing and big data analysis, enable enterprises to realize intelligent production and fine management, and improve production efficiency and quality. Secondly, in terms of sales and customer relationship management, the current computer application status enables enterprises to better manage customer information, sales business and marketing. Companies can use customer relationship management (CRM) systems to build customer files, track sales opportunities, and provide customized services, so as to improve customer satisfaction and loyalty. Through digital channels such as the Internet and social media, enterprises can communicate and interact with customers through multiple channels to promote product sales and brand promotion [2]. Thirdly, in terms of human resource management, the current situation of computer application enables enterprises to realize human resource information and automation management. Human resource management systems (HRMS) can help companies with employee information management, salary and welfare management, performance evaluation, and training management. Through the application of computer technology, enterprises can realize the standardization and automation of personnel process, and improve the efficiency and accuracy of human resource management. In addition, in terms of financial management, the current situation of computer application enables enterprises to realize the digital and centralized management of financial information. Financial management system (FMS) can help enterprises in financial accounting, cost management, budget management, etc., provide financial statements and financial analysis, and support enterprise decision-making and operation management. Through the financial management system, enterprises can improve the accuracy, integrity and timeliness of financial data, reduce financial risks and improve the level of financial management.

1.2 Application in the scientific research field

In the field of scientific research, the scope of computer application is expanding, which plays a positive role in the promotion and development of scientific research. Computer applications not only provide powerful computing and data processing capabilities, but also provide efficient tools and methods for scientific research, accelerate the process of scientific research, and promote scientific discovery and innovation. First, in terms of experimental design and data processing, the current situation of computer application enables scientific research to more efficiently and accurately conduct experimental design and data processing. Computer simulation technology can help scientists in experi-

mental design and parameter optimization in a virtual environment, so as to reduce experimental cost and risk, and improve experimental efficiency. At the same time, the powerful ability of computers in data processing and analysis enables scientists to process and analyze large-scale and complex data, and extract potential laws and trends, so as to promote the in-depth and comprehensive scientific research. Secondly, in terms of science simulation and modeling, the current situation of computer application enables scientists to carry out complex scientific simulation and modeling, so as to deeply explore scientific phenomena and analyze scientific problems. For example, computer simulation and modeling applications in astronomy, biology, physics and other fields help scientists study complex scientific phenomena such as the evolution of the universe, biomolecular structure and the properties of matter. The simulation and prediction application of computers in meteorology, earthquake, environment and other fields helps scientists to study important issues such as natural disasters, climate change and environmental protection. Thirdly, in terms of scientific data management and sharing, the current situation of computer application enables scientists to better manage and share scientific data, and promote the openness and cooperation in scientific research [3]. The Scientific Data Management System (DMS) can help scientists to standardize, store, share and retrieve scientific data, and improve the accessibility and reproducibility of scientific data. Scientists can use computer technology to process and analyze scientific data on a large scale to obtain more valuable scientific discoveries and insights.

1.3 Application in the medical and health care field

In the field of medical and health care, computer applications have a wide range of applications, from medical diagnosis, treatment plan formulation, patient management to health monitoring and health management have played a positive role, promoting the innovation and development in the field of medical and health care. First of all, in terms of medical diagnosis, the current situation of computer application enables doctors to make rapid and accurate disease diagnosis with the help of advanced medical imaging analysis technologies, such as computed tomography (CT), magnetic resonance imaging (MRI), etc. Computer-aided diagnosis (CAD) system can help doctors to automatically analyze and identify a large number of medical images, early detect potential lesions and disease risks, and improve diagnostic accuracy and efficiency. Secondly, in terms of treatment plan formulation, the current situation of computer application enables doctors to develop and optimize the clinical decision support system (CDSS) based on patients' individualized information and clinical guidelines. CDSS can provide advice on clinical guidelines, drug dosage, surgical plan and other aspects based on the patient's condition, medical history, laboratory examination and other information, to help doctors make more scientific and individualized treatment decisions. Thirdly, in terms of patient management, the current situation of computer application enables medical institutions to better manage patient information, medical records and medical resources. Electronic medical record system can help doctors to record, store and share the clinical information of patients, and realize the digitalization and information management of clinical data. The medical resource management system can help medical institutions to rationally allocate medical resources and improve the efficiency and quality of medical services [4].

1.4 Development and application of online education

First is the online learning platform. Online learning platforms such as Coursera, Udacity, and edX provide students with online courses and learning resources through computer applications. Students can learn the course content at anytime, anywhere, including video courses, online assignments, discussion areas, etc. Second is the virtual learning environment. Virtual learning environment (Virtual Learning Environment, VLE) is an online learning environment that provides students with learning resources, communication and interaction through computer applications. The VLE includes the functions of course management, content management, student management, online communication and evaluation, providing a comprehensive online learning solution. Third is online teaching tools. Many online teaching tools are included in online education applications, such as online classroom, interactive whiteboards, learning management system, online quizzes and exams. These tools realize the interaction, evaluation and management in the teaching process through the computer application, and improve the effectiveness and convenience of teaching. Fourth is the adaptive learning system. Adaptive Learning System (Adaptive Learning System) is an online educational application based on individual differences and learning progress. Through the computer application, the adaptive learning system can provide students with personalized learning content and learning path according to their learning situation and learning style, and improve the learning effect and learning experience. Fifth is distance education and online courses. The online education application also includes distance education and on-

line courses. Through computer applications, students can participate in teaching activities in different places and times, solving the geographical and time limitations, and realizing flexible learning methods.

2. Computer development trend

Computer development trends cover a number of fields, including hardware, software, applications, human-computer interaction, data science, etc. Here are some of the current and future computer development trends. First is artificial intelligence and machine learning. Artificial intelligence and machine learning technology will continue to develop in the field of computer, including deep learning, reinforcement learning, natural language processing, etc., will provide computer systems with more intelligent and independent decision-making ability, and promote the wide application of intelligent applications, such as intelligent voice assistant, autonomous driving, intelligent medical care, etc. Second is cloud computing and edge computing. Cloud computing will continue to evolve to provide more powerful computing and storage capabilities, supporting large-scale data processing and the deployment of complex applications. At the same time, edge computing, as an emerging computing mode, will be widely used in the Internet of Things, smart city and other fields, realizing near-end data processing and intelligent decision-making. Third is data science and big data. Data science will continue to evolve, including data mining, data analysis, data visualization, and other technologies to support the extraction of valuable information and insights from big data. Big data technology will continue to drive data storage, processing and analysis capabilities, and support intelligent decision-making and business optimization in all industries. Fourth is quantum computing. As a new computing mode, quantum computing has super computing power and parallel computing advantages, which is expected to bring revolutionary computing performance improvement in the future, and is widely used in cryptography, material science, drug research and development and other fields. Fifth is virtual reality and augmented reality. Virtual reality and augmented reality technologies will continue to evolve to promote the integration of computers and the real world in entertainment, education, training, medical care and other fields, providing a richer and more immersive user experience. Sixth is network security and privacy protection. With the acceleration of the digitalization process, network security and privacy protection will become a more and more important issue. The future development trend of computers will include more secure and reliable computing and communication technologies, and strengthen the protection of user data and privacy management [5].

Epilogue

As an indispensable tool and technology in modern society, computer is constantly developing and evolving, and has exerted a far-reaching influence on various fields. From enterprise management, scientific research to medical care, the application of computers in various fields constantly promotes the innovation of technology and business, bringing many convenience and development opportunities to human society. The future trend of computer development will continue to develop towards artificial intelligence, cloud computing, data science, quantum computing, virtual reality and augmented reality, network security and privacy protection, and environmentally friendly and sustainable development. These trends will lead to the continuous progress of computer technology and promote the progress of science and technology and society.

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