

Research on University security Platform based on artificial intelligence

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Abstract: With the development and maturity of science and technology, we have entered the era of artificial intelligence, which has effectively improved people's living standards. However, in order to ensure the security of university platform in this era, we need to pay attention to and solve the security problem of computer network information. The university is very important for our country, and it is the important plant of talent training and technology research. At present, the security platform of colleges and universities lacks prevention consciousness and safety management mechanism. This paper studies the security platform in colleges and universities based on artificial intelligence, expounds the various problems faced by the security platform in colleges and universities in the era of artificial intelligence, and discusses how to improve the security of the platform. In conclusion, colleges and universities need to improve their own security awareness, improve the management level of security platform. Once the university has formed a mature and stable network security information management mechanism, it can also cooperate with the third party to train security platform operation and maintenance personnel. Only in this way can we better maintain the security of the university platform in the era of artificial intelligence. In addition, this paper establishes an effective key management model to ensure the security of financial information management in universities under the wireless sensor network environment.

Keywords: Node; Security key management; University security Platform; Artificial intelligence

I. Introduction

With the advent of the Internet era, computer networks cover all aspects of people's lives, and the development of artificial intelligence is closely related to this technology [1]. Artificial intelligence uses computer technology to help people improve their quality of life and living standards by imitating the thinking and behavior of humans and making responses similar to those of humans. Artificial intelligence technology has complex and massive information resources in the process of convergence [2]. Once these resources cannot be effectively managed, the work efficiency of artificial intelligence will be reduced and the management cost will be increased [3-4]. With the expansion of artificial intelligence in the field of human life, artificial intelligence technology is widely used in colleges and universities. Artificial intelligence has a strong learning ability, which can help universities gather information, deal with some uncertain and unknown problems in the information network, and improve the efficiency of information management [5-6]. Artificial intelligence can also help colleges and universities form information networks. At

the same time, the body also has a certain coordination role. It can regulate and manage various information platforms in colleges and universities by itself, help to gather and distribute information, and improve the work efficiency of information platforms in colleges and universities [7-8]. The application function of artificial intelligence in university platform is very powerful, but there are still some problems in its security. Artificial intelligence can provide students with the best learning environment and protect their personal and property safety. Secondly, compared with traditional teaching methods, the teaching mode using artificial intelligence technology can expand students' thinking ability and innovation ability. In addition, the management of students' studies through artificial intelligence can also effectively improve the enrollment rate of schools. In addition, for the financial information management of colleges and universities, the key management scheme is the basic guarantee to ensure the security of network information storage and communication. Especially in the process of data encryption, the security mechanism of routing and data fusion needs the support of secure key management scheme. Therefore, it is necessary to carry out in-depth research through effective key management scheme, so as to ensure the security of university financial information in the wireless sensor network environment. Since artificial intelligence plays such a big role in university platforms, it is essential to improve the security of artificial intelligence.

II. The role of industrial intelligence in university platform

A. Student Life Management

Students are the main beneficiaries of college platform security, and the application of artificial intelligence can ensure the information security of students in the whole process from enrollment to graduation, and artificial intelligence provides students with the role of big data convergence. In the enrollment stage, artificial intelligence can accurately classify students' information, including their school roll, nationality, gender and performance, etc., and then summarize them and finally provide a new orientation plan. For the traditional enrollment allocation management mode, artificial intelligence can be classified and optimized according to students' preferences, and reasonably allocate students' life and learning from a variety of information elements. For example, in the dining management and safety management mode, artificial intelligence data analysis can provide students' favorite dishes according to the dining rules of students and the degree of liking for food, so as to guide students to eat at a reasonable time and reduce the situation of

food procurement waste. At the same time, students are supervised by intelligent access control, providing the best learning environment for students and protecting their personal and property safety.

B. Reform of teaching mode

In the era of artificial intelligence, the security platform of colleges and universities can have a certain influence on the teaching mode. Firstly, the traditional teaching mode should be changed, and the cross-platform research and learning should be carried out by using the new way of talent cultivation of artificial intelligence. Let the institutions have multi-platform teaching resources, help students improve learning efficiency, help the institutions reduce the cost of education, but also promote the fairness of teaching. Application of artificial intelligence technology compared with the traditional way to teach, teaching mode can expand students' thinking ability and innovation, strengthen the interaction between teachers and students, and its feedback and electronic devices in building intelligent integrated teaching methods for students to push with a needle to the sex teaching scheme, help students active learning after class. To test the learning effect of students and improve the learning interest of college students.

C. Improve teacher teaching

If teachers want to improve their own work quality, they can use artificial intelligence platform to obtain the optimal teaching plan through big data operation and optimize the unreasonable teaching situation. At present, the matching between subject knowledge background and specialty is not high in the teachers' endowment team of colleges and universities, so teachers' teaching ability often does not meet the needs of students. Therefore, colleges and universities can introduce talents through artificial intelligence, analyze the research direction and knowledge ability of teachers of different ages, and make effective planning for the school's teaching staff, so as to truly make full use of talents and avoid the waste of teacher resources in colleges and universities. At the same time, the effective teacher team can complement the artificial intelligence technology. Teachers can use the technology in class to improve their teaching ability and knowledge reserve, solve the problems students encounter in class, and ensure the cutting-edge of their own class, avoiding the obsolescence of knowledge that makes students unable to absorb good teaching content.

III. The problems and solutions of university security platform

The application of artificial intelligence in university platforms is very powerful, but it still has problems in security. In addition to the lack of attention paid by schools, teachers and students, school platforms will be interfered by viruses and hacker attacks, causing great losses to the platform. The main security problems are shown in Figure 1.

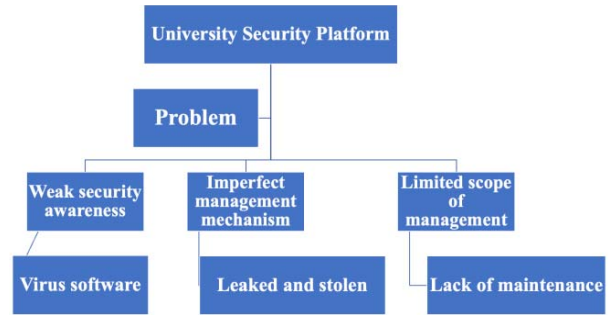


Figure 1. Problem of university security platform.

In the era of artificial intelligence, there is a risk of personal information leakage, especially for colleges and universities, which store a large number of teachers and students' information. If these data are not stored in place in the big data environment, there is no clear and reasonable analysis, then the personal safety of teachers and students cannot be guaranteed. At present, the data information collection and storage system of colleges and universities still has compatibility problems and security risks, which is easy to cause the fragmentation of data, making it difficult for colleges and universities to collect data and easy to cause data waste. Therefore, during the construction process, resources need to be integrated and shared to strengthen the maintenance of the security platform. The main methods are shown in Figure 2.

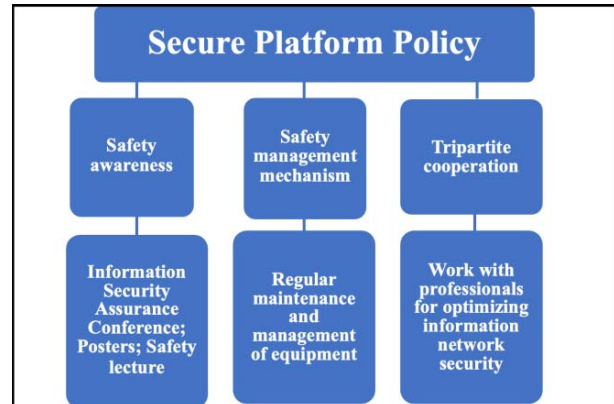


Figure 2. Secure platform policy.

IV. Financial security of colleges and universities in the era of industrial intelligence

At present, the academic and practical circles have reached a basic consensus on the three elements of successful implementation of HUMAN intelligence in financial management, namely, computer vision, natural language understanding and big data.

A. Computer vision

It is mainly reflected in the acquisition and processing of financial data, among which the intelligent recognition of fiscal and tax bills is very important to computer vision. And with a clear quantifiable definition of the application scene or business logic associated, through text recognition, image

processing and other technologies to automatically obtain massive/high quality/computable data, for financial management to achieve artificial intelligence provides a technical basis.

B. Natural language understanding

Set automatic processing rules, through the feasible algorithm to solve the problem so that the computer fully understand the text content, or the picture information into text information, and intelligent business analysis and audit.

C. Big data

The refined data after processing can realize the analysis and visualization of financial final accounts, move the control means forward, and promote big data to participate in the implementation of financial system specifications, data decision support, education cost optimization, risk control, resource allocation and other value activities, realizing the function of "data driving decision warehouse".

D. WSNs key management scheme design

Wireless sensor network is often used in financial management in colleges and universities, and key management mechanism is a very key management technology in sensor network security technology. Due to the limitations of wireless sensor network resources, many key

management schemes applied to wired networks and 802.11 networks cannot be applied to wireless sensor networks, such as asymmetric key encryption signature mechanism. The key management scheme and authentication key with low consumption need to be designed.

Based on the classification and analysis of WSN key management schemes, the model diagram of security authentication framework applied to WSN can be obtained (Figure 3).

Among them, the security protocol framework includes key management, security authentication and other security authentication protocols. The main tasks of key management are key initialization and key update maintenance. In the initial stages of key management, it is likely that neighboring nodes will need to establish mutually trusted relationships to ensure that the entire sensor can communicate with each other and remain secure. In the normal operation of wireless sensor network, key management is mainly to complete maintenance work such as key update and node joining and exiting, so as to ensure the network communication environment can be safe and reliable. When some nodes in the network environment are captured, ensure that the rest of the sensor nodes can run normally, and finally meet the needs of the upper application for security services.

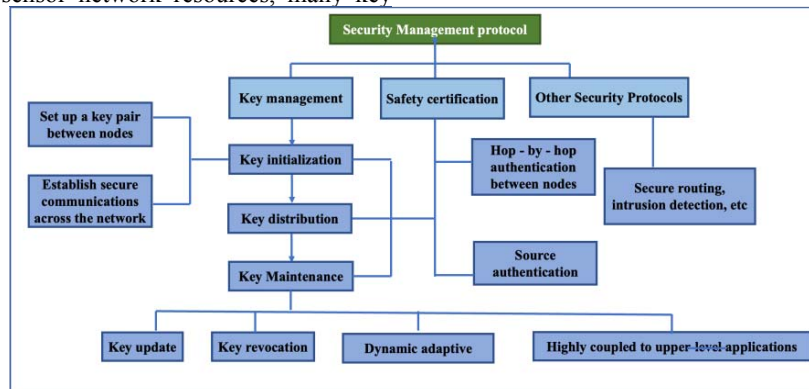


Figure 3. Key management and security authentication protocol system model

V. Application of artificial intelligence in financial management of colleges

The overall application idea of financial management mode in colleges and universities based on artificial intelligence is to sort out the internal control system and business process of colleges and universities on the basis of constructing the modern management structure, governance mechanism and operation system of colleges and universities.

Through the integration of image or text recognition technology, automatically generate structured electronic data, and the use of natural language analysis algorithm model and management rules, to provide intelligent data recognition, intelligent audit, etc., at the same time, according to the business rules automatically complete accounting processing, financial data analysis, etc., So as to achieve the "financial internal control real-time automation, information sharing, intelligent decision analysis" three goals (Figure 4).

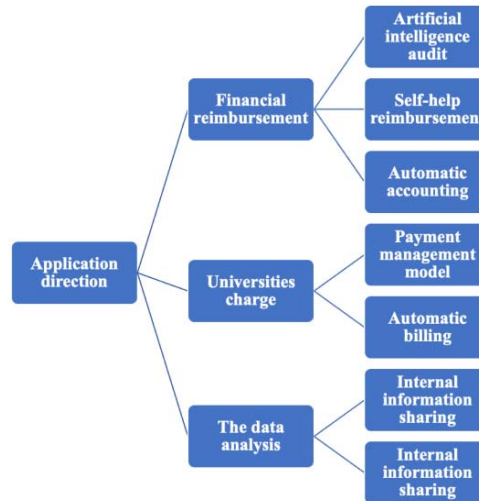


Figure 4. Application of artificial intelligence in financial management of colleges.

VI. Conclusion

To sum up, in the age of artificial intelligence, and machine interaction development towards intelligent computer network technology, artificial intelligence to gradually improve the ability of data processing and analysis, both computer hardware and software equipment, China now can be found within the network information technology, but there exist certain flaws under artificial intelligence security platform. Especially in colleges and universities, the data information application is massive, but also contains a large number of teachers and students research results, its security is threatened by hackers. Therefore, colleges and universities need to improve their security awareness, improve the management level of the security platform, form a mature and stable network security information management mechanism, and even train talents for the operation and maintenance of the security platform by cooperating with a third party. In this paper, we also design a network key management model based on wireless sensor technology to improve the security of financial information management in universities. So as to maintain the security platform of colleges and universities in the era of artificial intelligence. When the safety of artificial intelligence is guaranteed in the future, students will have a higher learning environment, their thinking ability and innovation ability will be expanded, and the enrollment rate of schools will also be improved.

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