Analysis of key technology of computer artificial intelligence recognition

Zekai Wang*, Zekai Shi and Mingqi Zhang
Department of Electrical Information, Shandong University of Science and Technology, Jinan, China

*Corresponding author: zekaiwang@sdust.edu.cn

Abstract. With the continuous development of science and technology, people for the research and development of artificial intelligence gradually in-depth, intelligent technology is widely used, can help people to improve the state of life, improve people's quality of life. This paper will analyze the computer artificial intelligence identification technology, explore its practical application in life, and put forward some suggestions for the development of intelligent technology.

1. Computer artificial intelligence identification technology related overview

1.1. the concept of computer artificial intelligence recognition technology
Computer intelligent identification technology, mainly through the computer system to identify data information, and then intelligent identification. The system is integrated with scanning and camera technology to identify data according to specific instructions, so as to meet people's needs. At present, the application of speech recognition is more common to help people solve problems in life.

1.2. the origin of computer artificial intelligence recognition technology
Artificial intelligence identification technology has been developed for a long time. At the beginning of China's emergence, many foreign countries have formed a relatively mature identification system, and the development has certain differences. With the continuous enhancement of China's scientific and technological strength, China's research speed in this field is gradually accelerated, the intelligent identification technology is more skilled, has a considerable research effect, far-reaching impact on people's production and life. It was first used in speech recognition technology in China to fully satisfy people's control of mobile phones. In work and life, people can control mobile phones through voice, which can help people's eyes to relieve some burden, reduce people's over-dependence on mobile phones, and help people solve problems quickly to improve their efficiency in work.

1.3. the status quo of computer artificial intelligence identification technology
Artificial intelligence identification technology has been developed in China for many years. Although it has made some achievements, it has encountered some problems and is in the bottleneck period of development. It needs to be improved in both technology and security aspects. The rapid development of the computer has caused a certain impact on all walks of life, its application is more and more widespread, with the emergence of network information security problems. Many departments are
monitoring and controlling the network, sorting out and screening the network information, so as to ensure the high efficiency of network information transmission, but the regulation of management is not strong. In computer information collation, data can only be collated and analyzed, but the authenticity of the information source cannot be determined, so its authenticity cannot be guaranteed. If you want to determine the authenticity of data information, you need to search the network information and do a good job of investigation and screening, which puts forward higher requirements for the intelligence of network technology. At present, there are some unsolvable problems in network security management. The difficulty of computer software development is decreasing, but the network crime is increasing, the lack of fast response speed in the operation of the computer, it is likely to appear network crime. In view of the network information processing work should be strictly controlled, intelligent application in this stage, constantly improve work efficiency, so as to reduce the possibility of failure, China's computer artificial intelligence identification technology still needs continuous research and development.

2. Computer artificial intelligence identification technology specific classification
Artificial intelligence recognition technology has its way to identify objects, for object recognition is mainly divided into two categories, one is the identification of life, the other is inanimate recognition. These two types of identification methods have a variety of identification technology, the following simple analysis.

2.1. It has life recognition technology

2.1.1. Voice recognition. The recognition technology mainly through the different voice recognition, each person's voice is different, pitch and timbre have its unique, through the voice to identify people, so as to promote the intelligent recognition technology and voice fusion.

2.1.2. Fingerprint identification. The identification technology is mainly through different fingerprints for identification, each person's fingerprints are different, so through the fingerprint identification of the person, to determine the identity of the person. Fingerprint recognition is more accurate than voice recognition.

2.1.3. Face recognition. The recognition technology mainly through different face recognition, for the facial characteristics of the character analysis, so as to determine the information of the character. The accuracy of face recognition will be higher, and it includes the pupil information of people. Each person's pupil is different, so it is more targeted in recognition.

2.2. non-life recognition technology

2.2.1. Smart card technology. The technology mainly through the integrated circuit board identification, in the identification of the information to calculate and store, thus encrypting information, information docking, to achieve the purpose of identification. This technology is widely used in life, the community access control card is this technology.

2.2.2. barcode technology. The technology is mainly for bar code identification, bar code includes one-dimensional code and two-dimensional code, so as to identify information, is also very common in life, such as WeChat two-dimensional code, payment two-dimensional code, etc.

2.2.3. Radio frequency technology. The technology mainly through the infinite electromagnetic wave to identify, can convert the signal into information, so as to carry on the information identification. The technology is non-contact identification, so it is easier to automate.
3. Computer artificial intelligence identification technology practical application

3.1. strengthen remote control
Computer artificial intelligence identification technology, for people's intelligent life to bring more possibilities, in the process of technology research and development, it is necessary to carry out a certain planning, for the spatial distance of intelligent identification to have a certain control, remote planning and control of intelligent identification technology is very critical. For example, in controlling the distance between the earth, in controlling the operation of the spacecraft by remote control. Remote control can realize remote control, for the spacecraft system management, the mission set on the ground through the system launched to the spacecraft, for mission control. In the remote control, it can achieve the established management objectives, ensure the safety of the spacecraft, and: Understand the problems encountered in the operation to make adjustments. After the information is identified, the object is detected to better understand the situation in outer space.

3.2. Speech recognition applications
Artificial intelligence recognition technology is widely used in speech recognition. In the current intelligent era, people are more in favor of voice control, and voice recognition function is also applied in more and more devices. Speech recognition system mainly through the robot recognition, which has a relatively complete set of intelligent system, can recognize the human voice, and understand the human language, complete the voice command, and even communicate. For example, mobile phones are very commonly used in life. At present, with the development of smart phones, many brands of mobile phones have voice recognition function, and mobile phones have their own unique intelligent robots, which can help people complete tasks, so as to help people improve the convenience of life. For example, Apple's "Siri", Xiaomi's "Xiao Ai classmate" and so on, they are intelligent workers of smart phones, able to carry out speech recognition work, and even can communicate with human beings. By calling "intelligent workers", people can understand the current weather conditions, make phone calls, play videos, voice to text and other tasks, bringing more convenience to people. Some can even control the smart appliances at home. When people are not at home, they can control the TV, air conditioner and other smart appliances at home, so that people's life has more possibilities, improve the sense of life experience and reduce the possible hazards in life. At present, the language of various countries is still being studied to enrich regional dialects, so as to help more people to work through speech recognition. In the future life, we still need to continue to explore and study more humanized speech recognition technology.

3.3. Application of machine intelligence
Robot technology is also belong to one of the important content of intelligent recognition, robot research and development need to consume large amounts of manpower and material resources, and research and development is difficult, robot research and development of our country still need continuous efforts, in the application process, intelligent robot can draw lessons from excellent country experience, for example, learning Japanese robot technology, combined with China's way of life was improved. Now there are many intelligent robots in people's life, which are applied in some families. For example, by intelligent robot cleaning, common sweeping robot is like this. It is also possible to use robots to carry out high-risk jobs, such as robots working at high altitude, to reduce the risk of working at high altitude. At the same time, the robot can be used to carry out human work and arrange the monotonous assembly line work for the robot to complete, so as to save a lot of labor and improve work efficiency. At present, China's robot technology is not mature enough, need continuous research and development trial, so as to improve the robot intelligence system, to provide more convenience for people's production and life.

3.4. Artificial neural network
Artificial neural network (ANN) is a relatively common technology applied at present. It mainly relies on the reasonable combination of processing units to improve the construction effect of the network
system and make abstract activities concrete, simple and simulated. For example, electronic components, principle components and artificial neurons, which are commonly used at the present stage, mainly use neurons in the human brain to store knowledge and information, and then carry out operations one by one, so as to meet the actual needs.

4. Conclusions
To sum up, computer artificial intelligence identification technology belongs to high-end research and development content, which can bring more convenience to people's lives. There are still some problems in the field of artificial intelligence research and development in China, which require researchers to continue to research and increase research and development efforts, so as to promote the development of computer artificial intelligence research and development and create a better life for people.

References
[1] Song Lai. Design and Implementation of Mine Electrical Automation Control System Based on Computer and Artificial Intelligence Technology [J]. China Metal Bulletin, 2016(11):80-81.
[2] Tang Zhaobo. Taking I, Robot as an Example, Analysis of the Influence of Computer Science and Technology on Artificial Intelligence [J]. Digital Communications World, 2017(12).
[3] Qin Zhi Zhen, Naheyan Tasneem, Ruhwald Morten, Denkinger Claudia M., Gelaw Sifras, Nash Madlen, Creswell Jacob, Kik Sandra Vivian. A new resource on artificial intelligence powered computer automated detection software products for tuberculosis programmes and implementers [J]. Tuberculosis, 2021, 127.
[4] Ziang Ye, Lei Su. The use of data mining and artificial intelligence technology in art colors and graph and images of computer vision under 6G internet of things communication [J]. International Journal of System Assurance Engineering and Management, 2021 (prepublish).
[5] Ren Qian. Application Analysis of Artificial Intelligence Technology in Computer Information Security [J]. Journal of Physics: Conference Series, 2021, 1744(4).
[6] Shan Yuxiang. "Research on Application of Artificial Intelligence Technology Based on Computer Network Technology in Numerical Control System". Proceedings of 2019 International Conference on Information Science, Medical and Health Informatics (ISMHI 2019). Ed. Francis Academic Press, UK, 2019, 318-323.
[7] Xiujuan Tian. "Application of Artificial Intelligence in Computer Network Technology". Proceedings of 2019 4th International Industrial Informatics and Computer Engineering Conference (IIIICEC 2019). Ed. Francis Academic Press, UK, 2019, 300-305.
[8] Jin Xing. "The Application of Artificial Intelligence in Computer Network Technology in Big Data Era". Proceedings of 2019 4th International Workshop on Materials Engineering and Computer Sciences (IWM ECS 2019). Ed. Francis Academic Press, UK, 2019, 224-228.
[9] Li Wang. "The Application of Artificial Intelligence Technology in Computer Network Teaching". Proceedings of 2019 3rd International Conference on Education Technology and Economic Management (ICETEM 2019). Ed. Francis Academic Press, UK, 2019, 700-704.
[10] Yue Shang. "Research Progress and Application Analysis of Computer Artificial Intelligence Technology". Proceedings of 2018 International Conference on Computational Science and Engineering (ICCSE 2018). Ed. Francis Academic Press, UK, 2018, 372-376.