

Research on the application of artificial intelligence in image recognition technology

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Abstract: Artificial intelligence is gradually widely used in our country, and with the development of the information age, the image recognition technology derived from artificial intelligence is also gradually known to people. The main principle of image recognition technology is the substitution of computer to artificial. These working principles can not be separated from the traction function of artificial intelligence, so as to realize many processing and judging of data information. Under the trend of gradual development of computer technology, the security and process of recognition data should be analyzed under the continuous extension of image recognition technology. In this paper, the image recognition technology in artificial intelligence will be analyzed and studied in depth, and the image recognition technology will be briefly summarized.

1. Introduction

Under the development pattern of image technology, image recognition technology has been widely used in our country. Driven by the development background of our country, more and more scientific and technological fields occupy the dominant position of our country's economic development. For the dissemination effect of image recognition technology, it has an irresistible trend. Image recognition technology can be applied in various fields, for medical life, shopping and fitness, so that food, clothing, housing and transportation can be managed and improved by image recognition technology. The main principle of image technology is to identify and detect the data in the range of image recognition, similar to fingerprint recognition, bar code recognition and so on, through the traction of artificial intelligence. Now this technology has been widely used in life security. It is not difficult to see the significance of image recognition technology for us human beings.

2. An Overview of the basic principles of Image recognition Technology

People's eyes are called visual effects, and people's eyes have a strong image recognition capability, with certain sensory effects on the people's buildings and colors. In the field of artificial intelligence, the technical personnel extend and develop the image recognition technology aiming at the visual effect of the human eye, Data storage of different stages and meanings is carried out on different images or bar codes, so that the image recognition is in practical application, and the accurate and effective identification is ensured. During the development of the image recognition technology, in order to realize the state that the human eye recognizes the image and has no difference, the scientists have tested the data program of the image recognition technology in the design process, And the sensory integration of the human brain memory data is carried out aiming at the process of capturing an image by the computer data, so that the image recognition technology is fully reflected.

3. Identification process in artificial intelligence image

With the promotion of the social and economic development system, artificial intelligence technology has been widely used in recent years, and at the same time of the application of artificial intelligence technology, the technology of image recognition is derived. The image recognition

technology of the computer and the human eye's sensory effect is used for image recognition, and the important research results of our country in the computer information technology field are presented in different degrees.

We take the artificial intelligence technology as the essence, integrates the artificial intelligence technology into the image recognition function, for the information data acquisition, as well as the sensor guide between the signal transmission, all provides the certain authenticity and the security. In image recognition, there are different degrees of variation in the differentiation of information data, not only to ensure that too hidden data information will not leak, but also to effectively identify the reliability and authenticity of information data sources. Because for the image recognition technology to take samples, the corresponding characteristics of the recognition, in this mode, image recognition for multiple languages and identity interactive recognition process, need to store a certain memory into the exclusion, so as not to identify the wrong information. At the same time, image recognition is integrated into computer information technology, it has the characteristics of basis for the data program and the technical regulation of recognition. For the law of image recognition, it is necessary to have authenticity and high degree of recognition, so as to achieve the high efficiency image recognition technology of artificial intelligence.

4. The Common Form of the Application of Image Recognition

4.1 Pattern recognition form

Among the image recognition technology, pattern recognition is a phased pattern with a large number of data and information recognition. According to the rich data and experience in the computer image recognition database, the known recognition data are protected and perfected, while the new data information is modified and integrated, combined with the modern scientific and technological principles, and the shortcomings of image recognition function in data information storage are improved. The recognition pattern is divided into two stages: the first is the learning stage, the second is the realization stage, according to the data storage process of the two stages, the sampling and distinguishing of image recognition are carried out, the recognition system of computer stored data is classified and recognized regularly, and the corresponding image recognition of computer application program is carried out, so as to realize the stage pattern of recognizing image and achieve the unified management of data and information. In the process of recognition, the capture of new image information should be timely and accurate, and the database integration of new image data should be carried out to avoid the disadvantages caused by certain limitations, and to put an end to the error information produced by image recognition.

4.2 Neural network form

Most of the forms of neural network are used in the data integration of image recognition technology. the most basic thing is to merge your traditional image recognition technology into neural network. Based on the tradition, this kind of neural network formation mode provides a new environment for image recognition technology to a certain extent.

The main purpose of this kind of neural network is to simulate the technical senses of human animal organisms with artificial intelligence neural network as the core. Compared with the traditional image recognition technology, this neural network pattern has certain cost-effectiveness and complex programmed data, but it has a good application effect for the due image recognition technology. After the image data is extracted and applied, the main characteristic of mapping in the program data of neural network (figure 1) pattern is more comprehensive and perfect precision recognition, followed by effective classification processing. Under the traction of artificial intelligence field, this kind of neural network pattern is integrated into image recognition technology and widely promoted in the recognition of various enterprises and electronic intelligent devices. QR code, face data, vehicle license plate information and so on have high precision recognition effect.

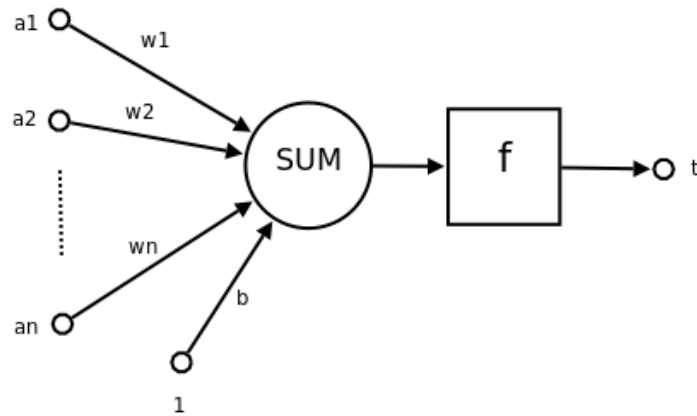


Fig. 1 Neural network pattern mapping

4.3 Nonlinear dimension reduction form

For recognition technology, nonlinear identification technology is a high form of the main body. The main advantage of its technology is that it distinguishes the resolution of effective data pictures. At first, this technology is nonlinear processing and has the characteristics of repeated and multidimensional, so there are some difficulties in the process of research and development. This nonlinear dimension reduction form of image recognition is also very complex for the clarity of time concept. In the application of recognition, the face is three-dimensional. In the case of uneven spatial distribution of high dimensions, the image recognition in the form of nonlinear dimension reduction can effectively extract the important features of the face, achieve high accuracy and high recognition.

5. Conclusion

To sum up, China's economic development has obtained different degrees of reform and innovation in continuous scientific and technological innovation, facing the integration of information technology and the application value of image recognition technology in artificial intelligence. This paper combines the common form of image recognition application, the basic principle of image recognition technology and the important process of artificial intelligence image recognition in detail.

In the future development system of our country, image recognition technology based on artificial intelligence, will be widely used in various fields. People's food, clothing, housing and transportation depend on the image recognition technology to complete, and we, for the users of image recognition technology, should have a certain understanding and cognition of image recognition technology, and clearly know that image recognition technology will be integrated into our daily life, and will promote economic development and speed up the pace of human life.

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