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REVIEW

Application and Development of Computer Artificial Intelligence Technology

Yu Zhang*

University of Liverpool, Liverpool L69 3BX, United Kingdom

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ABSTRACT

In the development of modern society, Internet technology has been popularized and applied. Artificial intelligence technology is not only found in science fiction movies, but has been widely used in industry, tertiary industry and people's livelihood. Under the background of rapid advancement of science and technology, computer artificial intelligence technology will play an important role in the future. Due to a series of problems in the development of computer artificial intelligence technology, it is necessary for relevant personnel to strengthen research on the application and development of computer artificial intelligence technology. The paper mainly studies the application and development of computer artificial intelligence technology, and hopes to bring more convenience to the daily life of the people.

1. Introduction

At this stage, Internet technology has been widely applied to the lives and work of the people, which has greatly changed the way people live and work. Computer artificial intelligence technology is an emerging technology that plays an important role in completing automatic planning and intelligent control. It reflects human wisdom and social value to a large extent. Based on this, the Paper expounds the related content of computer artificial intelligence technology, introduces the development history and direction of computer artificial intelligence technology, studies the application of computer artificial intelligence technology, and analyzes the future development trend of computer artificial intelligence technology.

2. Related Contents of Computer Artificial Intelligence Technology

2.1 The Concept of Computer Artificial Intelligence Technology

At this stage, people from all walks of life generally believe that artificial intelligence is only a technology involving computer science, but in fact artificial intelligence involves many disciplines, such as psychology, physiology, and linguistics. Therefore, the goal of artificial intelligence technology is to imitate human beings, transcend human beings, and use different high-tech means to make machines produce the same basic abilities, behaviors and ways of thinking as humans[1]. In order to achieve this goal, artificial intelligence technology needs to have physical objects as a carrier, so that it can play

**Corresponding Author:*
Yu Zhang,
University of Liverpool, Liverpool L69 3BX, United Kingdom;
E-mail: ZhangYu_1604@163.com

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the role of artificial intelligence technology, and the main carrier is intelligent products. In the development of the new era, everyone applies intelligent products, such as smart phones and computers, every day. The application of these intelligent products provides a lot of convenience for the daily life and work of the people. Therefore, the main content of modern artificial intelligence research includes not only machine learning, but also automatic design, expert systems and other content. At present, artificial intelligence products are relatively common, but the development time of artificial intelligence is very short. This concept was first proposed by an American scientist in the 1950s. In the decades of development, there have been three major leaps and bounds. Among them, the first leap of meaning is that the robot invented by the designer is not a robot without thinking ability, but can perform a series of logical reasoning instead of human; the next leap refers to the interaction between the intelligent system and the environment; the most recent leap refers to the improvement of the level of intelligence of the robot and the ability to complete self-learning. Any development stage is inseparable from computer network technology, so the development of artificial intelligence is determined by computer network technology, and computer network technology plays an important role in artificial intelligence.

2.2 The Advantages of Computer Artificial Intelligence Technology

Under the background of rapid advancement of science and technology, computer network technology can effectively transmit data and improve the speed of information exchange, making the links between countries all over the world increasingly close, and it has the advantages of high efficiency and convenience. Artificial intelligence refers to systematic and flexible management of various data information, which makes the application of artificial intelligence in computer network systems support the efficiency and stability of computer network operation.

In addition, the connection between computer network technology and artificial intelligence technology is very close, and it needs artificial intelligence to systematically manage it.

2.2.1 The Stability of Network Operation

With the rapid development of social economy and the continuous improvement of science and technology, computer technology has been applied to human daily life. The connection between enterprise, human life and computer network technology is very close. However, there are many adverse factors in the application process of computer network technology. Computer network technology can intelligently process related data, but cannot process fuzzy data. The effective application of artificial intelligence in computer network technology makes the computer network have the logical thinking ability of human beings to effectively analyze and process complex and fuzzy data. The application of artificial intelligence enhances the thinking ability of computer networks and effectively processes the complex data, which greatly improves the work efficiency of the people and reduces the investment in work costs. Moreover, artificial intelligence technology has reduced social production costs and provided support for the further development of social economy.

2.2.2 Facilitate Network Management

In the development of the new era, the use of computer networks to communicate and transmit various information and data around the world has made the computer network structure increasingly complex, and relevant departments need to strengthen the hierarchical management of the computer network structure. At this stage, the network structure generally implements the polling method and manages it hierarchically, which requires the exchange and cooperation of personnel at all levels.

The multi-agent collaborative distribution thinking in the artificial intelligence system makes the communication between the various management layers more closely, and effectively controls and manages the network structure mode. At this stage, the computer network structure model is expanding day by day, and the application of artificial intelligence has become the key to social development. Relevant departments need to realize the cooperation of artificial intelligence and computer network technology to improve the overall efficiency of network operation.

2.2.3 Less Computing Resource Consumption

Under the background of rapid improvement of computer network technology, human beings have entered the era of big data, by processing large amounts of data, a small amount of useful data is obtained from massive data, and simply applying computer technology not only consumes a lot of time, but also consumes a lot of physical strength. The application of fuzzy control in artificial intelligence can obtain more useful data from massive data, which greatly improves the speed of data processing and data retrieval. Moreover, the application of artificial intelligence technology has improved everyone's work efficiency, and the integration of artificial intelligence and computer

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network technology has met the needs of processing large amounts of data at this stage.

3. The Development History and Development Direction of Computer Artificial Intelligence Technology

3.1 The Development History of Computer Artificial Intelligence Technology

Computer artificial intelligence technology was proposed in the 1950s. Relevant scholars have carried out a series of researches on this and obtained certain research results, such as the proof of machine theorem. And a lot of theoretical knowledge has been widely concerned, such as the revised rules depicted by Donald O. Hebb, which laid the foundation for the modification of neurons. At this stage, artificial technology has developed rapidly, but the range of artificial intelligence technology is relatively wide, which makes the development of various fields have a certain gap and cannot provide support for this technology. In the 1970s, relevant scholars proposed the concept of knowledge engineering, which produced a commercialization expert system and an intelligent system. It has gained popularity in the world and created high value in related fields. However, due to the limitations of the expert system itself, artificial intelligence technology faces new challenges. In the rapid development of various disciplines, the expert system is increasingly perfect, through the effective integration of related functions, such as a variety of knowledge representation, intelligent language, etc.[2]. In the development of the new era, computer artificial intelligence technology presents the trend of parallel reasoning and multi-expert system development, but the theory and technology of computer artificial technology are still in the primary stage, and further research is needed.

3.2 The Development Direction of Computer Artificial Intelligence Technology

Computer artificial intelligence technology has comprehensive characteristics, and its development space is relatively broad. Future computer artificial intelligence technologies will present the direction of fuzzy processing and neural networks. Firstly, automatic reasoning will become an important research direction. The theoretical basis is to effectively combine computer and artificial intelligence, mainly based on the dynamic characteristics of the system; secondly, the intelligent interface is created to achieve the goal of communication between people and computers, which provides a lot of convenience for everyone's work and life, which makes the improvement of intelligent interface has become the key research content; finally, data mining is the key to the research of computer artificial intelligence technology. It is mainly based on the application database, discovering and using the knowledge system, acquiring more knowledge from the database, and then automatically acquiring knowledge.

4. The Application of Computer Artificial Intelligence Technology

In the development of the information age, many advanced science and technology have been integrated into the development of various industries, providing support for the further development of the social economy. As an emerging technology, computer artificial intelligence technology has been effectively applied in many fields and plays a very important role, which has caused great changes in the daily life and work of the people, and has greatly promoted the development of society. Based on this, the following mainly studies the application of computer artificial intelligence technology.

4.1 Game Artificial Intelligence Technology

In the rapid development of social economy, games have become an important topic in all ages. Everyone will be exposed to computer games, especially young people. Although everyone is more "disgusting" games, games have become a key part of people's lives. Anyone who comes into contact with the game knows that there is something invisible and intangible in the game. This thing is AI. This is artificial intelligence, but everyone thinks that AI is a game system. However, there is still a big gap between artificial intelligence in the game and academic artificial intelligence, which is consistent with academic artificial intelligence in many aspects. For example, game AI and academic AI have certain credibility, especially in the virtual space created by the game, you can hardly feel that you communicate with the computer, but always think that you are communicating and communicating with other players.

4.2 Realize Remote Independent Planning and Control

Computer artificial intelligence technology can remotely plan and manage outer spacecraft millions of kilometers away from the Earth, for example, NASA's application of computer intelligence systems to accurately control and adjust spacecraft has become the first country in the world to use computer artificial intelligence technology for remote control. Moreover, the remote intelligent program

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is connected with the mission objectives set in the ground system, and can also complete independent planning and dynamic monitoring of the outer spacecraft, which helps the ground console to grasp the actual operation of the spacecraft and find a different location in time for the program. Effectively detect, target and recover by timely issuing adjustment instructions to achieve the safety and stability of the spacecraft in remote outer space, and provide reference for ground researchers.

4.3 Achieve the Goal of Auto Autonomous Control

From the development of computer artificial intelligence technology, computer artificial intelligence technology involves many aspects, and the visual system is the key content. The effective application of this system provides guidance for the car to drive, and the car advances according to the driving track. Related studies have shown that the United States and other Western countries have applied visual systems in computer artificial intelligence technology to micro-cars, and use computer artificial intelligence technology to automatically control cars, which allows the car to automatically navigate more than two thousand kilometers, more than 80% of the time is controlled by the visual system. In addition, relevant personnel need to analyze and understand the visual system in depth, recognizing that people in the process of controlling the car are mainly reflected in the car's search for export, but there are many shortcomings in the application of this technology. Relevant personnel need further analysis and research to reasonably calculate the optimal driving direction of the car, effectively control the operation of the car, and thus achieve unmanned driving.

4.4 The Application in Medical Industry

In the rapid development of social economy, computer artificial intelligence technology has been widely used in the development of various fields and plays an important role. The application of computer artificial intelligence technology in the medical industry has improved the deficiencies in traditional medical care, which has greatly improved the modern medical level and efficiency, for example, in the process of probabilistic analysis; computer artificial intelligence technology is applied to the medical diagnosis process. In addition, a lot of medical personnel lack the knowledge of computer artificial intelligence technology, and in the process of applying this procedure, the medical staff can accurately determine the actual situation of the patient and observe the patient's complications. Therefore, the application of computer artificial intelligence technology in the medical industry has effectively improved the medical level and provided support for the further development of the medical industry.

5. Prospects for the Future Application of Artificial Intelligence

In the rapid development of the new era, computer artificial intelligence technology has a close relationship with human life, and has been integrated into the people's clothing, food, housing, education and other aspects. This is an important direction for the future development of artificial intelligence.

5.1 Driver-less Car

In the development of modern society, many large auto companies began to study driver-less cars. Cars with self-identifying road conditions and automatic driving functions in 007 series movies will become a reality. In the development of the Internet age, the technology of self-driving cars is not only artificial intelligence technology, but also the introduction of new integrated technologies such as automatic control and visual computing to improve the architecture of existing vehicles, with automatic identification, automatic analysis and automatic control. Therefore, in the future development of society, autonomous vehicles will achieve three technological breakthroughs: first, use camera equipment, radar, laser rangefinder to obtain more road condition information; second, use the map to complete automatic vehicle navigation; third, the speed of the car and the direction of travel of the car are effectively controlled based on the existing information data. In the future development of self-driving cars, the information exchange and mutual induction between vehicles can effectively coordinate the driving speed and form direction of the vehicle, avoid the collision problem of the vehicle, and provide guarantee for the safety of the self-driving car.

5.2 Intelligent Classroom

In the rapid development of society, many kinds of intelligent teaching software came into being, teachers can use these software to send teaching courseware to students, in this way, the students can answer the questions. The students interact and communicate with the teachers, which will increase the interest of the teaching class and provide more convenience for the teachers. Other than that, during the period, students can better review the wrong questions in the class, and can also read the courseware they have learned in the later period, and the teacher can clarify the mastery of the students' knowledge, so that students with different learning enthusiasm can be found[3]. Therefore, the future intelligent classroom has the characteristics of time extension, students can not only learn more in the

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classroom, but also use intelligent electronic equipment to conduct pre-class preparation and after-school review, in this way, students can arrange learning in a fun learning environment and improve their self-learning ability.

6. Conclusion

In summary, with the rapid advancement of science and technology, computer artificial intelligence technology has great advantages and has been widely applied to the development of various industries. At this stage, computer artificial intelligence technology has made great achievements, but from the essence of computer artificial intelligence technology, this technology needs to change constantly in adapting to the development of society. Relevant scholars need to increase the research of computer artificial intelligence technology and develop a sound expert decision system to meet the development needs of modern society. Moreover, in the future development of society, the application of computer artificial intelligence technology will bring more convenience to human life.

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