

Thinking about Artificial Intelligence

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Abstract: As the development of information technology and computer technology, artificial intelligence is widely used in various related fields, and plays a greater role. In this work, firstly, we introduce the applications of artificial intelligence, such as Man-Machine war, intelligent robot, personal electronic assistant, etc. Secondly, we introduce the effects of artificial intelligence to the life, economic and social. Thirdly, we propose the issues of artificial intelligence. Lastly, we look forward to the future research on artificial intelligence.

Keywords: artificial intelligence, robots

1. Introduction

In the Chinese chess man-machine war in March 2016, AlphaGo 4:1 beat South Korea's Li Shishi with 4:1. This match caused widespread concern around the world, also let artificial intelligence and deep learning concepts into the public view.

Artificial intelligence, which simulates or emulates human thinking processes and intelligent behavior, is a comprehensive subject, involving psychology, philosophy, computer science, linguistics and other subjects. Artificial intelligence is mainly to simulate the human visual, auditory, tactile, sensory and the way of thinking [1,2]. The purpose is to make the machine automation and intelligence. By this way, it can protect the person responsible security, improve their efficiency. Artificial intelligence simulates the human life or work environment by machine language programming and algorithm implementation.

As DeepMind founder Hassabis said: "The artificial intelligence is a great technology, which itself is neutral, can be used for good or bad place, so we have to make sure that the user is responsible." [3] Based on this view, the United States, Britain, Japan, the United Nations, the European Union, IEEE and other international organizations have promulgated some strategy, laws, standards and norms of artificial intelligence. They hope to promote the healthy development of artificial intelligence technology and industry through artificial intelligence policy and ethics.

In this work, firstly, we introduce the applications of artificial intelligence, such as Man-Machine war, intelligent robot, personal electronic assistant, etc. Secondly, we introduce the influence of artificial intelligence to the life, economic and social. Thirdly, we propose the issues of artificial intelligence. Lastly, we look forward to the future research on artificial intelligence.

2. The Applications of Artificial Intelligence

Most disciplines have their own research areas, unique research topics and techniques. Artificial intelligence has been applied in a wide range of fields, including medical diagnosis, electronic trading, robot control, remote sensing, etc [4].

(1) Man-Machine War and artificial intelligence:

Man-Machine War refers to the human and artificial intelligence program playing chess game. There were three milestone Man-Machine Wars in the history. The first one is that Deep Blue lost the world chess champion Kasparov with 2:4 in February 10, 1996, but beat Kasparov 3.5:2.5 in May 11, 1997. The second one is that Watson participated in "dangerous edge" and beat many players. The third one is that AlphaGo beat Li Shishi with 4:1 in March 2016.

(2) Intelligent Robot

Intelligent robots have intelligent mechanisms, such as recognition, reasoning, planning and learning, which combine perception and action intelligence. The famous intelligent robots are American running robot STANLEYSTANLEY, American vacuum cleaner robot Roomba, Underwater robot AUV ARIES, and Japanese violin playing robot.

(3) Personal Electronic Assistant

Personal electronic assistants in electronic products can support natural language input, and they can remind weather forecasts, scheduling, and search information, etc. In addition, the personal electronic assistants can learning the users' sounds and intonation to response answers based on dialogues. The famous personal electronic assistants contain Apple iris, Microsoft Little Ice, Baidu XiaoDu.

(4) Communication

The purpose of network management and maintenance is to accurately understand the network needs, optimize the network design and deployment. Artificial intelligence can perceive the network status in real time and eliminate the faults in time. As a result, the entire network control is basically automatic, and the network management needs less people.

(5) Medicine

In biotechnology, artificial intelligence can bring a better way of data processing. Artificial intelligence has been widely used in the field of health care, such as virtual assistant, medical imaging, drug mining, nutrition, biotechnology, emergency room/hospital management, health management, mental health, a total of 11 areas of wearable devices, risk management and pathology.

(6) Education

Artificial intelligence technology has been used in the education industry. The chat robot can answer students' questions. With the help of VR and computer vision, students can accept the hands-on teaching. Speech recognition technology can help students learn foreign languages. In all, artificial intelligence has been used in teaching, learning, training, testing and evaluation of the education link to speed up the process of personalized teaching.

3. The Effects of Artificial Intelligence

The development of artificial intelligence has a great impact on human beings and human's future, which involves many aspects of human cultural life, economic interests and social role [1, 5].

(1) Artificial intelligence improves the quality of life

Artificial intelligence has a huge impact on people's lives in all aspects. Family Nanny Robot can help do housework. Intelligent medical hardware products can timely response to the health of the human body. In short, artificial intelligence technology has produced a lot of products for people's lives to provide convenience, and meet the needs of people's entertainment.

(2) Artificial intelligence promotes economic development

Artificial intelligence creates new industry, products and services, and prompts the economic industry chain subversion and change. Through the substitution of the production line workers and the substitution of the intelligent information system to the manual operation, the production efficiency is increased and the labor cost is reduced.

(3) Artificial intelligence promotes social change

Artificial intelligence brings economic benefits to the users, sellers and creators, and it also causes a lot of social problems, like any other new technology. For example, people worry that artificial intelligence technology is out of control so that robots will threaten human's security. In addition, the current law is only useful for humans, but cannot meet the constraints on the robots.

4. The Issues of Artificial Intelligence

The artificial intelligence technology has two sides. It promotes the progress of society, economy and society. Meanwhile, it brings some issues [6].

(1) Lack of system theory

The theory of artificial intelligence contains some supervised learning algorithms and unsupervised learning methods, which were first proposed in 1980s and remains in use at present. However, now the application circumstances are very complex, so that the system theory of artificial intelligence technology should be constantly improved.

(2) Lack of experts

The artificial intelligence technology is complex and it is difficult to control. Only less professors and experts master the technology, and some powerful companies produce the valuable products. In order to protect trade secrets, there is a lack of communication between these experts, which might restrict the development of artificial intelligence.

(3) Security issues

With the development of the artificial intelligence technology, the robots are getting smarter. So some people fear that robots are smarter than humans, in turn, control humans. In addition, artificial intelligence technology needs to collect much data, some of them is people's behavior and location, which may cause the privacy leakage of the ordinary people, and leads to some security issues.

5. Future Research on Artificial Intelligence

The development of the Internet has promoted the development of artificial intelligence. And the big data create favorable development conditions for artificial intelligence. Although the technology and applications of artificial intelligence have gotten some great breakthroughs, there is still much room for development. Intelligent era has been striding forward and the country's attention gradually increased, so that Industrial pattern and social structure will be affected. Artificial intelligence makes the life more abundant and convenient. Meanwhile, many companies have developed artificial intelligence technology, Such as Google and Apple have set up artificial intelligence teams to develop deep learning and machine learning technology. In this context, artificial intelligence has become a hot field in the employment of entrepreneurship. And there is still a great space and a lot of opportunities to promote the development of artificial intelligence technology [7].

6. Summary

Artificial intelligence is the frontier technology. The theories and achievements will control other technology and science in a certain degree. Nowadays, more and more companies began to artificial intelligence as the development direction of the enterprises, experts generally believe that the development of artificial intelligence is a good thing. Nowadays, there are many research results of artificial intelligence in people's daily life. In the future, the development of artificial intelligence technology will also be able to alter people's work and life.

7. Reference

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