



# Research on Computer Science and Technology Based on Artificial Intelligence

Changxu Duan

Wuhan East Lake University, Wuhan 430212, Hubei, China.

**How to cite this paper:** Changxu Duan. (2024) Research on Computer Science and Technology Based on Artificial Intelligence. *Future Trends in AI Research*, 1(1), 13-16. DOI: 10.26855/ftair.2024.12.004

**Received:** October 7, 2024

**Accepted:** October 28, 2024

**Published:** November 17, 2024

\***Corresponding author:** Changxu Duan, Wuhan East Lake University, Wuhan 430212, Hubei, China.

## Abstract

Since the 21st century, computer science and technology represented by artificial intelligence has achieved rapid development. The birth of artificial intelligence has overturned people's traditional concepts, lifestyles and ways of thinking. At present, all aspects of social life are inseparable from computer technology, and artificial intelligence technology is also rapidly entering people's daily lives. This article will briefly analyze the impact of computer technology represented by artificial intelligence on intelligent life from several aspects of social life.

## Keywords

Artificial intelligence; social life; computer technology

## 1. Computer science and technology in daily life

In today's era, computers have penetrated into people's daily activities and are closely linked to the daily activities of the masses. Now, people are gradually moving from industry to computer development. In terms of learning, computer technology has penetrated into every corner of the campus, and more teachers and students have adopted modern scientific and technological means. Computers play an important role. The emergence of distance education provides families with high-quality teaching services; at work, people's work is increasingly closely connected with computers, such as statistics, financial auditing, logistics, etc. As laptops become more and more popular, people can move their workplaces to their homes. With the rapid development of computer technology, higher demands are placed on the use of computers. Artificial intelligence is an emerging technology that has attracted much attention from the industry for its high efficiency, automation and good usability. Since the emergence of AI, its scope of use has become wider and wider, and it is conceivable that it will bring about tremendous changes in all aspects in the future.

## 2. Development of artificial intelligence

Artificial intelligence is a technology of modern science and technology. It can use computers to simulate human thoughts and actions, and let computers replace human thoughts and actions. Artificial intelligence is one of the most promising technologies in the new era. It has a lot of room for development in all aspects, such as Go and AlphaGo. Artificial intelligence is part of it. It can be said that the popularity of artificial intelligence is beyond doubt. However, we must realize that the current artificial intelligence technology has not yet been fully developed, and the ANN simulated by computers is far inferior to real humans. Although artificial intelligence has made great achievements in the field of image recognition and has many mature results, it is still limited by modeling in natural language processing and has not achieved the best results. Although artificial intelligence is still in the early stages of primary development, the impact of intelligent technology on people's daily lives cannot be underestimated. Therefore, some daily examples should be used to illustrate how much it affects our lives.

### 3. The role of artificial intelligence in intelligent life

#### 3.1 The relationship between education and artificial intelligence

Since the founding of the People's Republic of China, with the people's continuous pursuit of education, the development and quality of education have made great progress. With the development of information technology today, the traditional and single teaching model can no longer meet the needs of modern education. Computers with great development prospects represented by artificial intelligence are applied in the practical application of teaching systems. Take English as an example. Traditional English teaching in China pays less attention to listening and speaking, which has led to a decline in the reading and communication skills of many students. This has a lot to do with the teaching environment. Through the integration of online teaching and wisdom, students can be fully immersed in the real English atmosphere. Not only can they get close to teachers, but they can also train their listening through online communication, correct their pronunciation through computers, and really like foreign languages through interesting learning methods. At the same time, it also has a certain promoting effect on the learning of English grammar and vocabulary. In the long run, the ultimate goal of AI education is to be able to truly achieve "unmanned" teaching, and true intelligence requires advanced information processing technology, but the current technology is not perfect enough. Some top universities and research institutes in China are also continuing this work. Ashok Goel from the School of Computer Science at Georgia Institute of Technology in the United States created an online Jill Watson in January 2016 using IBM Watson's Watson software. The robot will serve as an assistant teacher in this course and answer students' questions. The teachers found that Jill Watson's answers were 97% accurate. Today's mechanical assistants are able to communicate directly with humans. The application of this technology in teaching has effectively alleviated the shortage of teachers, the inability of teachers to answer questions in a timely manner, and increased students' interest in online teaching. This is only a preliminary application of artificial intelligence technology. The development of the entire field of intelligent teaching is still in its early stages, and there is a lot of room for development in the future. For example, it is impossible for AI to communicate with students emotionally, so as to achieve the purpose of emotional education. Therefore, in the future, an important breakthrough of AI in education is to have robots' emotions so that they can communicate emotionally with students in class.

#### 3.2 The effect of artificial intelligence in the home

"Smart home" is a family life service platform that integrates structure, service, management, system and control. It uses modern communication, automation, computer, radio and other technologies to integrate various facilities of family life, and realizes comprehensive control of the family with the help of the Internet, so as to create a high-quality, efficient and convenient living environment. In the early 1980s, China began to appear in Europe, the United States, Japan and other countries, and gradually developed in the late 1990s. Especially driven by the development of the housing industry, a huge development opportunity has emerged. Entering the 21st century, people have higher and higher requirements for the intelligence of living, and pay more and more attention to shared information, which is more and more safe, comfortable and convenient. The existing home intelligent system mainly includes set-top boxes that can be combined with the Internet; the second is computers that can control home appliances; the third is modular wireless remote control, which can realize remote control of multiple functions. The emergence of intelligent homes enables people to enjoy the modern living environment more easily, orderly and efficiently. With the advancement of science and technology, people's requirements for a better living quality are getting higher and higher, and the intelligence of the family is also an indispensable part. This old smart home, due to the lack of the most critical AI function, its intelligence level is not high. In recent years, due to the continuous development of imaging, sound, wireless, automatic and other technologies, robots have become more and more important in the home. In the home, the applications of intelligent robots include: movement, avoidance, facial recognition, motion detection, sound interaction, skin sensing, etc. This series of functions makes it easier for robots to interact with people and can bring more services to people. Because the home intelligent "brain" is a kind of intelligent home robot in the home. It can be foreseen that when this "brain" becomes more and more powerful, one day, people can enjoy services without blind spots and blind spots at home.

#### 3.3 The effect of artificial intelligence in transportation

In traditional travel, people have to drive themselves or rely on other transportation. With AI, driverless cars have become a reality. Now, big companies like Google and Baidu are developing drones. Most automakers say they will

have a driverless vehicle by 2020. Autonomous vehicles can greatly reduce accidents, for example, machinery will not cause fatigue; at the same time, they will also significantly reduce the greenhouse effect of emissions; driverless cars will also bring about a sharing craze, because everyone will buy less Private cars, thereby saving people money; this will greatly reduce traffic congestion and people will gain more freedom. In addition to self-driving vehicles, it can also be used for travel forecasting. In the past, everyone collected information and planned their itinerary by themselves, but now, with the development of AI technology, many traffic recommendation software will provide them with the most optimal route based on users' personal information and comprehensive statistics on large amounts of data. Optimal travel plans and predictions through machine learning methods. With the development of artificial intelligence technology, human transportation will become more automated and freer. I believe that this era will come soon.

### 3.4 The role of intelligent technology in communication

Being able to understand people's words and instructions and respond to them is the most basic and direct performance. We use Turin's experiment as an example, asking a robot to simulate a conversation with a human. If more than 30% of the answers are regarded as human by the tester, then the computer will pass. Today's intelligent question answering systems are developing very fast. For example, Sogou and Baidu have the ability to "guess by typing," and Microsoft's "Xiaobing" and Apple's Siri both have the ability to "chat." Speech recognition is the most significant manifestation, which affects human communication and communication. The most commonly used are mobile devices such as smartphones, which can use Chinese for text input and then convert it into Chinese characters. This way, you no longer need to use text to transmit messages, which saves a lot of time and is convenient. communication. Currently, various Internet companies are investing huge funds and manpower to conduct investigations in this field in order to seize the market and customers. We can foresee that when language technology develops to a certain extent, the scope of recognition will become larger and human communication will become more convenient. We can also make the input method have a conversation function. For example, if you don't know how to answer a question, then the input method will give the correct answer. This shows that the typewriter has a certain analog function, and if every conversation can be written out completely, it will be a pioneering technological breakthrough. Through AI, you can imitate human thinking, instead of manually typing on the keyboard, you can enter your thoughts into the computer input method. It is conceivable that in the near future, the entire world's communications will undergo huge changes.

## 4. Conclusion

"Artificial intelligence" has had a profound impact on our living mode in many fields, for example: it has brought a new teaching mode to our teaching and improved the effectiveness of teaching; it has brought more convenience to users' home life; it has saved energy for passengers, provided convenient and fast transportation, and saved manpower and material resources; it has provided a very novel communication method for people and showed a bright prospect. Artificial intelligence is a very critical discipline. It is still in the early stages of development. We still need to continue to work hard to improve it so that it can serve people's daily lives and create a smarter future.

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