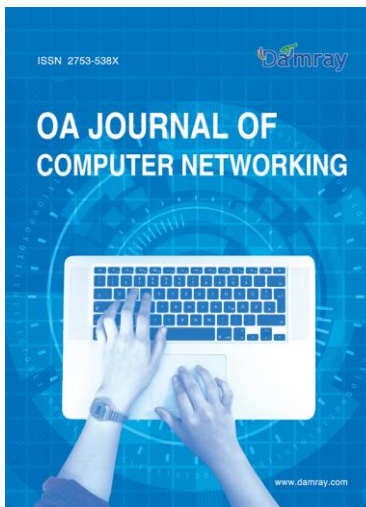


Application of Artificial Intelligence in Information Communication



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Abstract

With the continuous progress of society and the rapid development of information technology, people's demand for intelligent, automated and other high-tech technologies is getting higher and higher. Artificial intelligence is a new industry, which can not only solve some complex problems, but also improve the efficiency and quality of work, with good generality and flexibility. At the same time, the application area of artificial intelligence is very wide and promising. Computer technology is one of the most important and representative technologies in terms of artificial intelligence. It can not only transmit and process data through the Internet and mobile communication networks, but also integrate various electronic components together to form a whole structural system to realize information exchange. Therefore, artificial intelligence technology has a wide application prospect and great development potential in people's daily life. In this paper, we analyze the positive role and importance of AI technology, and introduce the applications and challenges of AI in communication.

Keywords

Artificial intelligence, Information and communication, Application exploration

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1. Introduction

In recent years, artificial intelligence technology has been widely used in various fields. With the continuous improvement of artificial intelligence level, people also put forward higher requirements for information and communication systems. At present, most areas in China have realized the development process of informatization, digitalization, networking and automatic control, while some developed countries have long completed the information and communication construction work and achieved good results. Artificial intelligence technology has a broad prospect in the field of smart home, and it will become a new growth point for the future electronic communication industry.

2. The Connotation and Importance of Artificial Intelligence

2.1 Connotation of Artificial Intelligence

Artificial intelligence is a new concept, which is a computer technology with high intelligence, high level and depth. In the information society, the human brain has a huge and complex knowledge structure, and artificial intelligence is a very important research direction in the information field, which has high application value in communication and network. In a broad sense, intelligent technology is a new concept. In a narrow sense, an interactive learning process between computers and other devices. Artificial intelligence is the human brain through the processing of relevant data to achieve knowledge acquisition as well as storage capacity, etc. This is the intelligent system to meet the required conditions to have a whole system formed out [1].

2.2 The Importance of Artificial Intelligence

Artificial intelligence is a new direction in the field of information, which has an important role in society, life and production, and it can solve many problems. For example, data mining and decision-making process, intelligent robot system, etc. With the rapid development and progress of computer technology, network technology and communication industry, people started to use advanced technology to improve efficiency, reduce cost and improve environmental quality for better results. At the same time, some new industries have emerged, namely artificial intelligence, which has a great role in information and a great potential to create more wealth value and profit sources for society.

Artificial intelligence has now become a very important development direction in the information age, with a very wide and profound impact on informationization, intelligence and networking. For example, big data technology, as computer technology continues to penetrate into the life of human society, people's demand for large-capacity databases is increasing, and artificial intelligence works extremely efficiently in screening, classifying, organizing, analyzing and processing massive amounts of information. Therefore, we can use artificial intelligence to integrate a large number of complicated and fragmented data sets. Through these effective methods it can be mined out so as to improve the efficiency of decision making and the accuracy of prediction [2].

3. Application of Artificial Intelligence in Information Communication

3.1 Building a Smart City

Smart city refers to the use of Internet of Things technology, cloud computing and other new information technology to achieve the intelligence of urban management and service work, then improve the efficiency of government work. The intelligent transportation system mainly includes the following aspects in the construction process. First, to establish a unified and perfect information management system. Second, the combination of existing resources and Internet data to build a network platform and provide the corresponding functions. Third is to optimize the configuration of infrastructure equipment through big data analysis technology. Fourth is the urban information system developed based on new technologies such as Internet of Things technology and cloud computing, which can effectively solve the current problems of excessive road traffic pressure and traffic congestion in China, improve the transportation efficiency of urban vehicles, reduce the incidence of traffic accidents and improve the level of traffic management.

3.2 The Introduction of Smart Phones

"Intelligence" refers to the positive impact of computers, electronic chips and other electronic devices on daily work. It can inhibit and eliminate the nerve endings of the human brain and then proceed to the next stage of the action or operational process. The application of artificial intelligence has great advantages for cell phones. The smart phone can realize the control of information data flow through camera and QR code technology, thus improving the operation efficiency and reliability of the communication system. It can also effectively avoid the call quality problems brought by traditional cell phones, and reduce unnecessary losses caused by users due to inconvenience of carrying mobile devices or losing passwords, etc. In addition, the combination of human-computer interaction function and communication technology using cell phone terminal devices can achieve the purpose of intelligent management and control. With the popularity of smartphones, cell phones play an increasingly important role in people's daily lives, and in a way, smartphones can control various behaviors in people's lives, which will gradually evolve into a problem [3].

3.3 Smart TV Comes into the Life of the Public

As one of the important components of mass communication media, TV is not only an information delivery tool and news broadcast carrier, it is also a new type of media. Smart TV has strong communication power and reception capa-

bility, which enables people to watch TV programs anytime and anywhere, as well as to watch live programs in real time through mobile terminals. In addition, with the development of artificial intelligence technology and the increasing degree of networking, this has brought new opportunities for smart communities. In the Internet era, China has nearly 100 high-definition cameras, dozens of line control stations, and hundreds of mobile LED. All of these devices can be remotely controlled and transmit information data via the Internet to perform functions such as real-time monitoring of televisions.

Smart TV can also apply artificial intelligence technology to TV program production, which achieves a shift from the traditional three aspects of information processing, storage and dissemination, you can see a lot of programs about news and information on Smart TV. As the level of technology continues to improve, people have a higher pursuit of entertainment, they are more interested in getting content and information on topics they want or are interested in through their cell phones. Nowadays, smart phones have become an essential part of daily life, bringing great convenience to people.

3.4 Artificial Intelligence Applied to Telecommunications Network Fraud Prevention

Telecom fraud refers to the use of computer networks, cell phones and other communication devices to falsify or fabricate false information, which will threaten the property and personal safety of the person concerned. Its characteristics are mainly: First, the criminal has a high technological content, and he uses a large number of high-tech means in the implementation of criminal acts. Second, criminals often use sophisticated technology to conceal their behavior and hide their true identity. Third, telecom fraud usually involves banks, financial institutions and other industries, which has a huge impact on society [4].

With the development of technology, telecommunication fraud is also becoming more and more frequent in cyber-crime, these cases are due to computer technology and communication equipment failure resulting in the inability to get accurate information in a timely manner, so data mining out through artificial intelligence for analysis, prediction and processing is an effective way to solve the problem. First of all, it is necessary to filter and extract all kinds of raw data information stored in the database. Then a complete, reliable and direct model for the calculation or decision-making process is established, and then input to the computer according to the model, so as to achieve intelligent recognition, judgment and reasoning functions, and finally achieve intelligent processing and prediction of data.

4. Artificial Intelligence Brings Challenges to the Communications Industry

4.1 Artificial Intelligence May Bring a Wave of Unemployment

The development of artificial intelligence technology will lead to the creation of a wave of unemployment, and this phenomenon has a huge impact on society. For example, smartphones replace alarm clocks and cameras, WeChat replaces phone calls and wallets. Such as this, there are some people who face unemployment because of their jobs, which need someone to lead them to cope and deal with. In this way, the development of AI technology may threaten people's lives and the economic lifeline of the country.

On the one hand, artificial intelligence brings new technologies in information and communication will be able to solve many problems such as effective monitoring and management that could not be handled before. On the other hand, it could also lead to the occurrence of some illegal crimes: for example, the use of machines instead of human beings to complete a certain task, tax evasion and the use of fake identities to access the system, and a series of other phenomena could occur. As of now, AI cannot avoid a wave of unemployment because it is a high-risk industry in itself and it requires a large number of people to do this work, and the development of AI will create a large number of employment problems. Therefore, we must study it in depth and establish a relevant system, so as to ensure that it can be most effective in information and communication [5].

4.2 Privacy Protection, Data Ownership Challenges

Artificial intelligence is a new technology in the field of information security, which has great advantages in protecting user privacy, but also brings certain challenges to data management, mainly by greatly reducing the control of personal information systems. Because computer network systems themselves have characteristics such as openness and scalable performance, their applications need to adopt to a large number of complex information, and fragile software can not guarantee the security of data. At present, computer viruses and hacking directly lead to frequent information leakage, and with the development of Internet technology, people are facing various security risks when enjoying convenient services, and information security problems are becoming more and more serious, which need to be solved.

The privacy protection of artificial intelligence is mainly in terms of information security. In the network, data trans-

mission, storage as well as transmission are managed by human-centered operation. With the continuous improvement of technology and the speed of computer technology development, people are no longer satisfied with the traditional sense of a series of defects arising from the process of data collection and processing. At the same time, due to the continuous renewal of information technology has led to the emergence of some new technologies and is applied in various fields. Therefore, information security needs to be further improved so that it can better adapt to the network environment in the future and provide solid protection for users' life, work and personal privacy.

5. Conclusion

Artificial intelligence is an emerging field, and currently there is a great degree of breakthrough in information. With the development of Internet technology and network communication industry, computer and electronic information technology interpenetration and integration, in the future, the new media based on the combination of intelligent technology and other related information technology means will be the general trend. In the future, more new technology products will appear and be widely used, and at the same time, traditional industries will be promoted to upgrade and modernize. This is of great importance to improve production efficiency and economic benefits.

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