

Development and Future Research of Artificial Intelligence

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Abstract: The ethical responsibility generated in the process of self formation is a unique topic for human beings. Moral responsibility frees mankind from dogmatism or blind religious claims. The formation of self should be proved by the achievements of ethical life, not just by the claims of words. Reliable self is manifested through the prosperity of life, which is manifested throughout life. At present, mankind is at an important crossroads. This study reveals the problems that may occur when AI imitates human beings, and examines the ideal life form that human beings should realize in the future and the ideal direction that AI development should take.

Keywords: Intelligent robot; Artificial intelligence theory; Artificial intelligence

1. What is AI

“Artificial intelligence system” refers to “automatic machine-based actors that follow the purpose specified by human beings. According to the purpose of human beings, artificial intelligence systems, based on software systems designed by human beings (including hardware), perform actions that affect the external environment by receiving and analyzing data internally. The system analyzes and infers data according to the internal operation logic, thus performing actions that affect the real or virtual environment.

For the understanding of AI, even consider the life cycle of technology. The context of the original technology life cycle is about the germination and decline of new technologies, and the process of technology and products being accepted through the market. Here, AI is indicated as a composite system with a life cycle, so as to pay attention to the social meaning of technology. As a technical system with a life cycle, AI has become non-visual because of the comprehensive characterization of technology, but it reminds us of the people who really plan and design the system. In addition, it also has the “extensive human existence” affected by each stage of the system.

2. The bias and diversity of AI

So far, the bias of AI and the diversity of AI industry are two different issues. In fact, they are two sides of the same problem and should be examined together in the political, economic and power relations. The link that links the bias of AI system and the diversity of AI industry into two sides of the coin is the discrimination of AI system reproduction and reinforcement. Because the discrimination within the AI industry is closely related to the bias of the AI system, and the bias of the AI system and the discrimination caused by it require the expansion of the diversity within the AI industry to alleviate the problem. The practitioners in the AI technology industry are one of the groups of human actors who have the most direct influence on relevant issues. So far, the diversity of AI systems and the bias and discrimination of AI systems have been understood as a feedback causal relationship. The problem of artificial intelligence system reproduction and solidified discrimination requires an artificial intelligence system with reduced bias, and then requests to actively reflect and accommodate the views of different stakeholders. To this end, it is required to promote the diversity within the AI technology industry, that is, the group of human actors with direct influence on AI systems, which can only be achieved when correcting the unfair bias and long-term discrimination history of the technology industry, including basic research. First of all, we should pursue the diversity of personnel in the industry. If we consider the entry and survival of the industry, we need to increase the diversity of the outside of the industry. The promotion of such diversity is conducive to the development of AI systems with reduced bias. On the other hand, AI technology can promote the diversity of workplaces in the technology industry. Human diversity and the skills to pursue diversity are interlinked.

3. Review and current situation of AI development

3.1 Review of AI and its development

AI technology in intelligent information society has become a part of modern life. The fourth industrial revolution is reproducing a different global historical perspective in the real world. In the past, the process of industrial revolution was to strengthen or replace the physical power of human beings to improve the convenience of human life. However, on this basis, the fourth industrial revolution has made super-intelligent artificial intelligence, in which human spirit and soul can participate, possible

The difference. Based on the innovative technology of deep learning, AI has gone through the process of connection and integration, and has developed to the super-intelligence type with autonomous machine intelligence. From the perspective of global history, there is the possibility of transformation that deserves attention. From this point of view, the time has come when expectations and concerns about the role of AI as a game changer are intertwined. Human-friendly AI has no problem.

One of the core technologies of automation in the fourth industrial revolution is artificial intelligence (AI). When automation technology is widely used in social life and completes work, it will rapidly change our interaction with others, our way of life, and even political behavior - voting - affecting the whole society, including the government and actors in daily life. New technologies, such as railway, electricity, telephone and internet, have changed everything. But AI is different from traditional technology. Because only AI is not human intelligence, but machine-driven intelligence. The core of automation technology is artificial intelligence. Understanding the range of capabilities of AI has become the most important factor in the development and operation of future technology.

3.2 Current situation and trend of AI

AI research has gone through three stages, including establishment, development and maturity. AI is divided into weak AI and strong AI, or super AI. Weak AI refers to specialized AI only for a certain field. AlphaGo can only play Go, while IBM Watson Ross can recite the legal provisions and judgments of the world, and calculate sentencing and other auxiliary work for judges. IBM Watson Health processes the diagnosis business by inputting and analyzing the blood examination and MRI image results of many patients. On the contrary, it is not a field, but has a variety of knowledge in all fields. Like humans, it is artificial general intelligence or strong artificial intelligence that fuses all kinds of information to draw conclusions. In other words, weak AI refers to AI with specific single functions such as text and speech recognition, which is designed by human beings and has difficulty in expansion. Strong AI is universal. Like autonomous cars, it has the function of self-learning to human level and is easy to expand. On this basis, super AI is an autonomous AI superior to human beings, with self-awareness, self-improvement, superhuman ability, scientific creativity, social sensitivity, and the ability to generate new algorithms independently. As human-friendly AI controllable AI technology is imperative, in order not to make AI the last invention of mankind, the moral and legal responsibilities of the person responsible for the development should be specified in detail during the whole process of AI development and utilization. It is allowed to use AI to develop another form of AI, but it is not allowed to allow AI itself to develop another independent innovative AI. In addition, we believe that the operation of strict supervision mechanism and fragmentation mechanism should be started for the expansion of artificial intelligence brought by the intelligent integration of the connection form of artificial intelligence itself. With the development of artificial intelligence technology, we should and will further emphasize the protection of human survival, freedom and human rights.

4. The ethical value of AI

AI ethics is a formal procedure to commercialize its own products. In the sense of consumption or evading responsibility for the problems that occur afterwards, it expresses concern about the washing of corporate ethics. From the standpoint of enterprises and developers, the criticism of the ineffectiveness of ethics is opposite to each other. In fact, the discussion about ethics of washing or fighting is hardly new. A long time ago, an enterprise put forward the case of "Green washing", which is similar to ethical washing. At that time, there were also many critics who believed that this was using consumers' awareness of environmental ethics for consumption. For those who argue that ethics is useless, there are also many people who misunderstand the meaning of ethics. For example, ethics is considered to conflict with personal interests, or to be subjective and relativistic, and can be changed at any time. More seriously, there is even a tendency to regard it as a series of prohibited packages for personal behavior. Only when the practical value of AI ethics is accompanied by the essential value of ethics can it play a productive and practical role. For example, an ethicist based on different positions, jurists and engineers looking for a common point to discuss the AI ethics discourse can expand the scope of academic discussion and make the means of solving problems multi-angled. The AI ethics discussed in the context of life can make up for the points that are easily overlooked in policy views and make contributions to strengthening the basic strength.

5. Impact on future lifestyle

AI can identify human needs and social problems, respond quickly and make direct democracy possible, thus enabling citizens to expand their participation in governance. In the future, AI will surpass the convenience service for mankind and can only be used in social, economic and political systems. AI will participate in the value judgment and decision-making process and make contributions to the country's strategic objectives. In a narrow sense, the future machine will engage in important political activities. The politics of the future society cannot rely on the ability of human beings to become the main body of political activities, nor can artificial intelligence monopolize decision-making. Artificial intelligence should make up for the deficiency of human beings and carry out with the cooperation between human beings and machines. In order to maintain social order and solve social problems, human innovation is better to seek mutual cooperation than to oppose machines. In this context, the robot political script pursues the method of human and artificial intelligence to jointly build cooperative politics, showing how machines and humans should coexist, and from this point of view, proposes the most ideal political future.

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