Artificial Intelligent Techniques in Engineering and Applied Sciences

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DESCRIPTION

Artificial intelligence (AI) is a branch of computer, it is a new science and technology to study and develop the theory, methods and application systems for simulating, extending and expanding human intelligence. The research objects in this field mainly include robot, language recognition, image recognition, natural language processing, expert systems and various engineering issues. So, the emergence and development of AI is helpful for human beings to finally understand the formation of their own intelligence in natural science. At the same time, it also promotes the development of computer industry, network industry and engineering applications, so as to bring great macro benefits to the economy.

The solution of problems by AI technology is how to let the machine solve the problem that the human will encounter as well as how to find the way to think and solve the problem according to a specific problem. At present, AI technology can solve the engineering problem through computer program, and can seek more accurate solutions.

One of the most enduring areas of inquiry in AI research is logical reasoning. The proof of the theorem is to let the machine prove the truth and falsehood of the non-numerical. Among them, it is more important to focus on the valid facts in large databases by finding reasonable and accurate methods. Besides, it also should pay attention to the proof of their credibility and to modify these proofs in time when new information appears.

Another manifestation of AI is the communication of natural language. Natural language processing is to make the machine communicate with human without hindrance, which is a typical example of the application of AI technology in practical field. At present, the main research content in this field is how to use computer systems to generate and understand natural languages based on topics and dialogue situations.

The pattern Recognition is the key to develop intelligent machine by AI technology. It is mainly to study the automatic processing and interpretation of the mode by means of mathematical technology, so that the computer can realize the functions of "seeing" and "hearing" and so on. The main characteristics of computer pattern recognition are fast speed, high accuracy and high efficiency. Computer pattern recognition also provides favorable help for human beings to understand their own intelligence.

With the rapid development of science and technology, human beings have entered the era of knowledge explosion. The traditional retrieval system is insufficient for such a large number and a wide variety of literature retrieval requirements. The important premise of the sustainable and stable development of AI technology is the intelligent retrieval module. It can be said that the application of intelligent information retrieval technology is imperative.

The expert system we often say refers to the knowledge acquired from human experts and used to solve difficult problems that only experts can solve. This is a knowledge-based system, which is also called knowledge-based system. Expert system is the most active and effective field in artificial intelligence technology. Nowadays, the expert system especially mimics the way experts think in dealing with faults, and its level can sometimes even exceed that of human experts.

Robots are no stranger to us and have been increasingly used in many fields, such as agriculture, industry, commerce, tourism, aviation and the sea. So, the problems studied in robotics mainly include the planning method from the optimal movement of the robot arm to the action sequence to achieve the robot goal. The research of robotics and robotics has promoted the development of artificial intelligence.

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