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THE ROLE OF ARTIFICIAL INTELLIGENCE IN ASTRONOMY

Abstract

This article reflects information on how artificial intelligence can be applied in space exploration. Artificial intelligence has already become an integral part of our daily lives. People use it as a source of information, in robotics, agriculture, programming and other fields. At the same time, artificial intelligence can also be applied in the field of astronomy. Through artificial intelligence, it is possible to process large volumes of information investigated by space devices, predict and calculate the trajectory of space objects, and provide space weather forecasts. Artificial intelligence can also be widely used in future space exploration. An example of this is the habitation modules on Mars. Artificial intelligence is used to assess living conditions on Mars. Thus, it plays an important role in the exploration and analysis of minerals on Mars, thereby determining habitats and resources. In the future, it can also be used to improve the quality of life of people on Mars. Delays in the communication of people on Mars with Earth are inevitable, and this can also cause psychological difficulties. Artificial intelligence can analyze people's psychological state and provide them with appropriate training and entertainment platforms, which can help reduce loneliness. It is expected that there will be limited access to doctors and hospitals on Mars. Special sensors can be used to check human health and provide medical diagnosis and treatment according to the current situation. The harsh conditions of Mars are dangerous for human life. Artificial intelligence can predict solar storms, radiation levels, and dust storms and warn them in time. Therefore, the application of artificial intelligence is important for the sustainability and safety of human life on Mars. In addition, astronauts can use artificial intelligence to control spacecraft, prevent collisions between fast-moving objects that can damage each other, and even predict future cosmic events and predict how they will affect human life. Artificial intelligence is used in the development of various robots, which plays an important role in the easy and accurate implementation of long-term space research. As can be seen, the role of artificial intelligence in the study and development of space and its objects is great. Thanks to this technology, astronomers will be able to study space in more depth and achieve new advances.