Thinking on Intelligent Development of Combat Aircraft

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Abstract

As the booming development of artificial intelligence, big data, and machine learning techniques, especially after AlphaGo beating the human opponent using the method of deep reinforcement learning, artificial intelligence technology has gradually begun to show clear and broad application potential in various fields. By reviewing the history of air war and the evolution of major technologies, this report deeply analyzes the nature and characteristics of air war. From the perspective of human-vehicle co-evolution, this report introduces the integration and application of artificial intelligence technology on combat aircraft and the main technical approaches.

Zhixiao Sun, who was born in Wafangdian, Liaoning Province in 1976, got bachelor's degree from BUAA in 1999, and master's degree from NUAA in 2010. Mr. Sun now is the deputy head of Shenyang Aircraft Design and Research Institute (SADRI) AVIC, vice chief designer and researcher in the field of aircraft general design, and is engaged in combat aircraft general design and the research of artificial intelligence (AI). Mr. Sun has devoted to the development of various key national UAV types/projects. Now he has served as UAV expert in Equipment Development Department AVIC, chief expert of an AI project of Science and Technology Commission, Central Military Commission, PRC, and chief designer of a large UAV type. Mr. Sun has been honored with many prizes including Second Class Prize of National Science and Technology Advancement Award, Prizes of Provincial Science and Technology Advancement Award, and China's Youth Award.