1990

Defense Applications of Artificial Intelligence: Progress and Prospects

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Recommended Citation

Pace, D.K. (1990) "Defense Applications of Artificial Intelligence: Progress and Prospects," *Naval War College Review*: Vol. 43 : No. 1 ,
Article 22.
Available at: https://digital-commons.usnwc.edu/nwc-review/vol43/iss1/22

paring this useful and thought-provoking reference work.

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Andriole, Stephen J. and Hopple, Gerald W. ed. *Defense Applications of Artificial Intelligence: Progress and Prospects*. Lexington, Mass.: Lexington Books, 1988. 385pp. $65

Over the next few years, smart computer systems will become ubiquitous. They will impact all aspects of the defense world: policy and strategy, resource and force structure decisions, system design and production, and operational planning and execution. Thus, it is important that the entire defense community have at least some level of understanding of artificial intelligence (AI), a topic that many have hitherto relegated to the arcane domain of computer specialists.

Andriole and Hopple have provided us with an excellent introduction to AI as it pertains to defense and a succinct, yet surprisingly comprehensive, status report on defense applications of AI. Consequently, this book is a very valuable resource for both the uninitiated and the person with substantial AI knowledge. It is not AI hype, nor is it overly technical. It is a candid, balanced, well-written, and authoritative assessment. Its score of contributors come from several universities and major defense-related organizations as well as a variety of government R&D activities.

The book is divided into four main sections. The first provides a foundation for understanding AI and its tools and techniques. The second presents the technology-push side of AI's spread within the defense world by presenting a number of specific AI research areas that relate directly to military operations (such as intelligent training systems). The third (and largest) section focuses on the applications-pull of defense needs by presenting a number of AI defense applications, including management of the air-land battle, tactical planning and replanning, SDI, logistics, and tactical command and control. The final section of the book addresses future prospects for AI in defense.

Although the book is oriented toward Air Force and Army applications of AI, this does not diminish its importance for naval officers because its primary value lies in its presentation of the general principles and potential of AI rather than in its descriptions of specific AI applications.

Readers should find this book stimulating.

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Hampson, Fen Olser. *Unguided Missiles: How America Buys Its Weapons*. New York: W. Norton & Company, 1989. 370pp. $19.95