MAP08

Explainable AI – Best Practices and Military Applications

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Abstract

Artificial Intelligence, from theory to practice, has been an evolutionary act of heroics in academia across the arts and sciences.   Early-stage AI made its way through the halls of academia with specific emphasis on models of cognition without concern for emotional reference. In recent history, scholars and practitioners have joined efforts to extend the qualification and quantification of AI from the halls of academia to Wall Street and the manufacturing shop floor. This extension includes application of AI via approaches such as deep learning and neural networks which have historically produced consistent outcomes without detailed understanding of the algorithm's performance by the scholar or practitioner.   Today, scholars and practitioners alike, enjoy the convenience of AI-enabling platforms such as ChatGPT, a platform which also performs without the user's understanding of the underlying algorithms. Extending historical AI, including today's modern AI-enabling platforms, into military applications concerning the advancement of warfighting has been met with varying degrees of scrutiny from policy makers and the warfighters themselves.   This research aims to clarify the important historical context of legacy AI approaches while at the same time present best practices and potential military applications of modern algorithms in the context of explainable AI – whereby the knowledge and expertise of the algorithmic code generator is coupled with the knowledge and expertise of the military operator to cross-check the inputs and outputs of the AI against known or expected objectives. It is this application of explainable AI that will significantly change the skill and abilities of tomorrow's warfighter.

Conference Track

Military Applications