MAP07

AI-driven Cybersecurity Solutions in Complex Manufacturing Organizations

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Abstract

In the digital era of industry 4.0, advanced manufacturing faces formidable cybersecurity challenges due to the integration of technologies such as the Industrial Internet of Things (IIoT) and artificial intelligence (AI), which expose systems to significant cyber threats including data breaches and ransomware. Comprehensive cybersecurity strategies protect operations, intellectual property, and competitive advantage in the global market, with AI playing a pivotal role in enhancing resilience against evolving cyber threats. AI-driven cybersecurity solutions play a crucial role in real-time anomaly detection and adaptive defense strategies, offering a cutting-edge solution to enhance proactive cybersecurity measures against evolving threats. The research explores AI-driven cybersecurity solutions within the context of advanced manufacturing, addressing a pressing need in an increasingly interconnected and vulnerable industrial landscape. Findings include identification of anticipated impacts on manufacturing security suggesting integrating AI-driven cybersecurity measures into complex organizations technology domains can significantly enhance the resilience of advanced manufacturing systems against cyber threats.

Conference Track

Military Applications