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Internet of Things Security Assessment and Mitigation Strategies for Resilient Military Operations

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Abstract

Military operations are increasingly reliant on Internet of Things (IoT) technology, demonstrating a combination of benefits and security risks. In order to comprehend the impact of operational resilience on IoT security risks and vulnerabilities specific to military operations, this research identifies and evaluates these issues. The study aims to highlight weaknesses in the existing frameworks and methods for military assessment while also suggesting improved and resilient frameworks. It also focuses on proactive security measures, reactive incident response skills, as well as effective mitigation techniques to address IoT security problems in military operations. This research seeks to investigate and assess the security threats and weaknesses unique to IoT technologies in military operations. It attempts to uncover shortcomings in present assessment processes, comprehend how operational resilience affects IoT security, and suggest improved frameworks for resilient military operations. To gather and analyse qualitative and quantitative data from research papers, data reports, and articles, the study employs a thorough methodology. By analysing qualitative and quantitative data, this study aims to emphasise the importance of enhancing IoT security to safeguard military activities' integrity and effectiveness. Additionally, it seeks to incorporate insights from interviews with military personnel and security experts to enrich the analysis. The findings and discussions of the study will provide insights into identified IoT security concerns, current evaluation process boundaries, and recommended mitigation strategies. To ensure the integrity and effectiveness of military activities, the research emphasises the significance of improving IoT security in military operations.

Keywords: *IoT security, Military operations, Operational resilience, Mitigation strategies*