IoT-Enabled Smart Battlefields: Enhancing Situational Awareness in Combat

Vaishnavi Thakare, Aarna Tanna, Sakshi Thete, Ruchika Tidke,
Krutika Thakare, Rudra Tarwade, Prof. Vaibhav Walke
Guru Gobind Singh Polytechnic Nashik, Maharashtra, India

Abstract*: The integration of Internet of Things (IoT) technologies into military operations has led to the development of smart battlefields, significantly enhancing situational awareness and decision-making capabilities. This research paper examines the role of IoT-enabled devices, sensors, and systems in creating interconnected environments for real-time data collection, processing, and dissemination. By improving communication, resource allocation, and threat detection, IoT transforms the dynamics of modern combat. The paper addresses challenges such as cybersecurity, interoperability, and infrastructure limitations, offering insights into future advancements and their potential to revolutionize defense strategies.*

Keywords: Internet of Things