

# Cyber security Threats in the Internet of Things (IoT) Ecosystem: A Review

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**Abstract:** *The rapid growth of the Internet of Things (IoT) has transformed traditional computing by enabling billions of interconnected devices to collect, process, and exchange data autonomously. While IoT technologies provide significant benefits across domains such as healthcare, smart cities, industrial automation, and transportation, they also introduce complex cyber security challenges. Limited device resources, heterogeneity, large-scale deployment, and weak security configurations make IoT ecosystems attractive targets for cyber attackers. This review paper presents a comprehensive analysis of cyber security threats in the IoT ecosystem. It discusses IoT architecture, threat models, major attack vectors, security challenges, and existing countermeasures. Additionally, emerging solutions based on machine learning, Blockchain, and zero-trust architectures are reviewed, along with future research directions.*

**Keywords:** Internet of Things, IoT Security, Cyber security Threats, Attacks, Privacy, Machine Learning, Smart Systems

