

Mitigating WiFi Jamming Attacks through IoT-Enabled Real-Time Detection and Response

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Abstract : This paper presents an IoT-based solution to address the growing threat of WiFi jamming attacks. Leveraging a combination of real-time data collection, machine learning, and responsive countermeasures, the system detects and mitigates interference on wireless networks. By employing low-cost sensors, SDR (Software-Defined Radio) devices, and advanced analytics, the solution effectively identifies abnormal signal patterns and restores network stability through adaptive channel selection and signal modulation. Testing demonstrates the system's capability to mitigate jamming attacks, reduce network downtime, and enhance wireless network resilience.

Keywords : IoT, WiFi jamming, network security, SDR, real-time detection

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