

# **Building a security monitoring system for fire and explosion warning and device control through a wireless sensor network.**

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**Abstract:** In the context of the high necessity of ensuring the safety of infrastructure, this topic focuses on building a security monitoring system based on wireless sensor networks for early fire and explosion warning. The objective of the research is to develop and deploy a practical application to automate the control process of security devices through wireless sensor connections. The applied method includes evaluating sensor algorithms and testing them in a controlled environment to optimize system performance. The significance of this research lies in its wide applicability across various fields, from industrial buildings to residential areas, contributing to enhanced security and the protection of human life.

**Keywords:** Security monitoring system, wireless sensor network, fire and explosion warning, device automation, practical application