Automation Using Wireless Sensor Networks

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Abstract: *Wireless Sensor Networks (WSNs) are one of the most promising technologies in the field of automation. A WSN consists of multiple sensor nodes capable of sensing, processing, and communicating data wirelessly. The integration of WSN into automation systems enables real-time monitoring, intelligent decision-making, and remote control without the need for wired infrastructure. This seminar focuses on the concept, architecture, and applications of WSNbased automation systems. It highlights the benefits of wireless communication in industrial, home, and agricultural automation. The seminar also discusses challenges such as energy efficiency, data security, and scalability, and provides insights into future trends including AI and IoT integration.*

Keywords*: Wireless Sensor Networks*