## **IJARSCT**



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 1, March 2025

## IOT-Powered Factory Intelligence and Security Hub

Mrs. Deokar R. N.<sup>1</sup>, Miss. Sujal Shinde<sup>2</sup>, Miss. Trupti Avhad<sup>3</sup>, Miss. Sakshi Devang<sup>4</sup>, Miss. Aishwarya Bibave<sup>5</sup>

Professor, Department of Electronics & Telecommunication<sup>1</sup>
Students, Department of Electronics & Telecommunication<sup>2,3,4</sup>
Amrutvahini College of Engineering, Sangamner, India

Abstract: The IoT-Powered Factory Intelligence and Security Hub is prototype with sensors and RTC is a cutting-edge solution that can revolutionize the industrial sector in India. As a developing country with a growing economy, India has a significant demand for industrial automation to enhance productivity, reduce energy consumption, and improve safety in the workplace. The prototype offers a cost effective and reliable solution to address these needs. The prototype consists of various sensors, microcontrollers, and software components that work together to monitor and control industrial loads. The sensors can measure different parameters such as human motions, Light intensity, smoke/gas, and Vibration, and transmit the data to the microcontroller. The microcontroller can analyze this data and make decisions based on pre-defined algorithms and rules. The software component provides a user interface to interact with the system, view real-time data, and configure settings. Data also monitor on IOT web server. RFID tag reader is use to provide security.

DOI: 10.48175/568

**Keywords:** Automation, Sensors, Factory Load-Centre, Controller, IOT web, Security

