

Home Automation System

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Abstract: *The world is rapidly moving towards automation as people have less time to handle all the work that needs to be done. Automation is an easy solution to control any product or machine to suit our needs. This article presents the development and implementation of a new home automation system unit using Arduino Nano as the main processing unit. The system integrates multiple sensors such as passive infrared (PIR) sensors for motion detection, gas sensors for monitoring gas issues, temperature sensors for detecting temperature changes, and light sensors for monitoring ambient light, as well as Bluetooth modules for seamless wireless communication and monitoring capabilities. The primary objective of this research is to create a smart and flexible home automation solution that enhances comfort, security, and energy efficiency.*

Keywords: Home Automation, Sensors, Bluetooth modules, Energy efficiency

REFERENCES

- [1]. N.David, A.Chima, A.Ugochukwu and E.Obinna,"Design of a home automation system using Arduino", International journal of Scientific & Engineering Research, Vol. 6, pp. 795-801, june-2015.
- [2]. Prof. M. B. Salunke, Darshan Sonar, Nilesh Denge , SachinKangude, Dattatraya Gawade, "Home Automation Using Cloud Computing and Mobile Devices", Vol. 3, Issue 2 (Feb. 2013), ||V2|| PP 35-37
- [3]. ElShafee and K. A. Hamed, "Design and Implementation of a Wi-Fi Based Home Automation System, "World Academy of Science, Engineering and Technology, vol. 68, pp. 2177-2180, 2012.
- [4]. Ahmed Elshafee, Karim Alaa Hamed, "Design and Implementation of a Wi-Fi based Home Automation System", International Journal of Computer, Electrical Automation, Control and Information Engineering Vol: 6, No: 8, 2012, pp 1074 – 1080.