

# IoT Based Night Patrolling Robot

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**Abstract:** *The implementation of an IoT-based smart night patrolling robot is presented in this paper, utilizing an Arduino Uno, camera module, sound sensor, ultrasonic sensor, motor driver, motors, Nodemcu, and buzzer. The proposed robot is designed to autonomously patrol a designated area and capture images and videos of the area using the camera module.*

*The ultrasonic sensor is used to detect obstacles and prevent collisions, while the sound sensor is used to detect unusual sounds and alert the user. The buzzer is included to provide an audible alarm in case of any significant disturbance in the patrolling area. The robot is designed to move around and change directions using the motor driver and motors, which are operated by an Arduino Uno.*

*The Nodemcu provides internet connectivity, enabling remote monitoring and control. The proposed system can be used for a variety of applications, such as surveillance and security, and has the potential to improve the efficiency and effectiveness of night patrolling operations. The proposed system is developed at a low cost, making it accessible to a wider range of users.*

*The implementation of the proposed system has been tested, and the results indicate that the system is efficient and effective in detecting and responding to environmental stimuli. The system is controlled using a web-based interface, and the users can monitor and control the system remotely.*

**Keywords:** smart night patrolling robot

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