

# Smart Defender System Using IOT

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**Abstract:** *The Smart Defender System is an IoT-based security solution developed using the ESP32-CAM module to provide real-time monitoring and intrusion detection. The system captures live images and video of the monitored area and automatically detects unauthorized access or suspicious activity. Whenever an intrusion is identified, the system instantly sends an email alert along with captured images to the authorized user, ensuring timely awareness and quick response. The primary objective of this project is to enhance security by offering a low-cost, automated, and efficient surveillance system with minimal human intervention. Users can remotely access live camera feeds through a web interface, while an interactive dashboard maintains logs of security events, captured images, timestamps, and alert history, helping analyze intrusion patterns and improve overall safety.*

**Keywords:** Computer Vision, Email Notification, Data Upload, Interactive Dashboard, Real time Footage, Data analytics

