

Project Title: AI-Powered Crime Monitoring System using YOLOv11 and ResNet-50.

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ABSTRACT:

Ensuring the safety of students and staff in schools and colleges is a critical priority. However, traditional surveillance systems rely on manual monitoring, leading to delays in detecting threats such as violence or unauthorized access. To address these challenges, we propose an AI-powered Crime Monitoring System (CMS) designed specifically for educational institutions to enhance campus security. This system integrates advanced deep learning models, including YOLOv11 for weapon detection and ResNet-50 for violence recognition, to monitor real-time CCTV footage and identify potential threats. Unlike conventional systems, which depend on human supervision, our AI-driven solution automates threat detection, ensuring faster responses and greater accuracy. Upon identifying violent behaviour or weapons on campus, the system sends instant alerts to school authorities and security personnel, enabling quick intervention and preventing potential incidents. The CMS is designed for deployment in schools, colleges, and university campuses, providing continuous monitoring of student activity in hallways, classrooms, playgrounds, and entrances. With real-time analysis and automated alerts, the system enhances security by reducing human error, minimizing false alarms, and ensuring proactive threat prevention. By implementing AI-based surveillance, educational institutions can create a safer learning environment, protect students from violence, and respond swiftly to security threats.