TOP STUDENT PROJECTS

Best innovations from VTU, Gokak

PROJECT TITLE

AI CCTV WILDLIFE SURVEILLANCE SYSTEM

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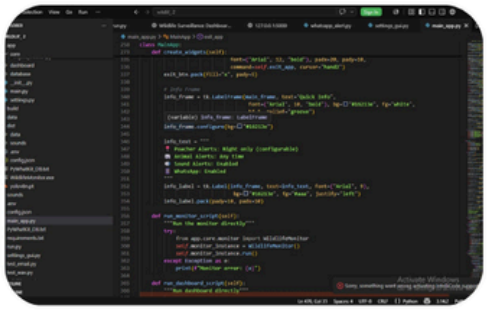


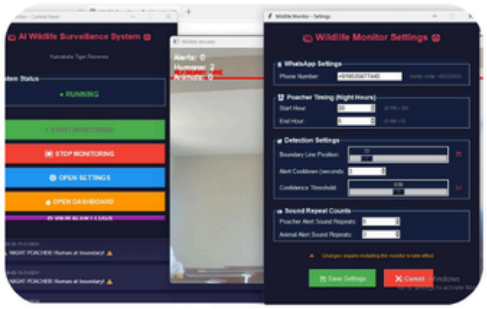
PROBLEM STATEMENT

Poaching and animal boundary crossings in forest reserves go undetected due to lack of real-time monitoring, leading to wildlife loss and human-animal conflict. This creates a need for an automated surveillance system that can provide instant detection and alerts to forest authorities for timely intervention.

SOLUTION

The AI Forest Sentinel is a software-based system that uses a webcam and YOLOv8 for real-time detection of animals and poachers. When a target is detected, it sends a WhatsApp alert with an image, activates a voice alarm, and stores the detection data. The system achieved 85–95% accuracy and delivered alerts within 2–5 seconds during testing. It enables forest authorities to respond quickly to potential threats and prevent illegal activities in protected areas. The system also helps reduce human-animal conflicts by providing timely monitoring and early warning notifications. It supports wildlife conservation efforts by ensuring continuous surveillance and efficient incident reporting in forest regions.





SCAN ME

Technology stacks:

- ESP32-CAM
- Python + Embedded C++
- YOLOv8 + OpenCV
- Firebase
- GSM + GPS + LoRaWAN
- React.js