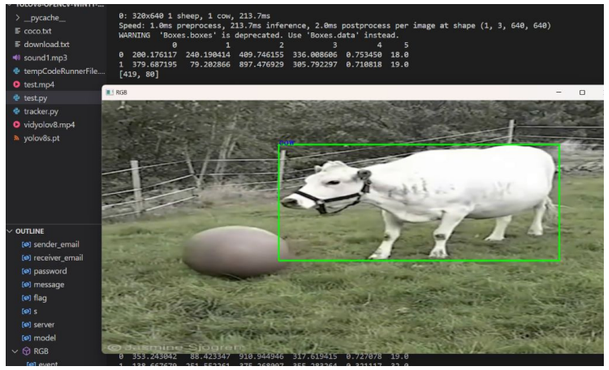
OVERSEE ANIMAL MOVEMENT IN FARM-AREA

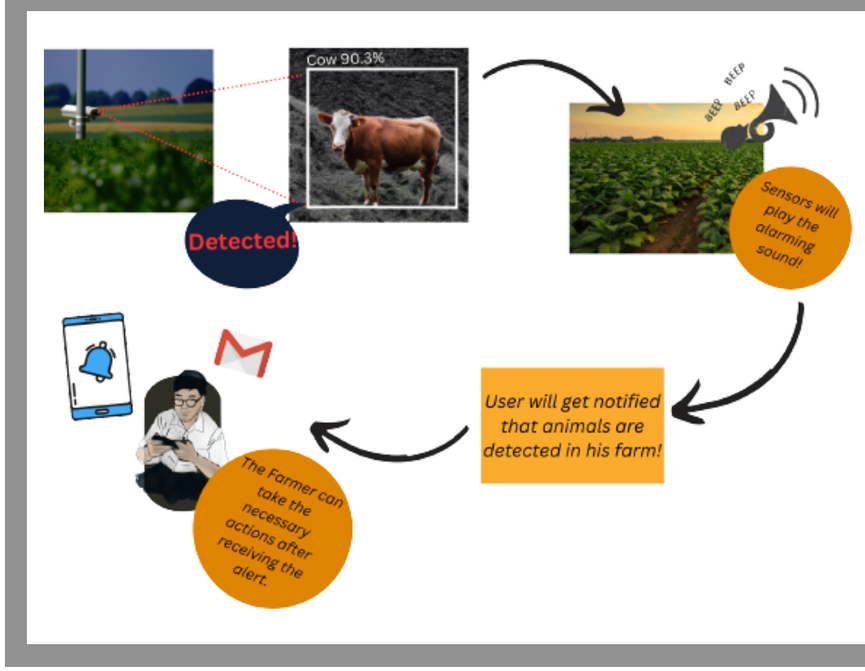
Abstract

- Wild animal incursion has been a source of disagreement for farmers from a long time.
- Animals like deer, wild boar, cows, elephants and monkeys etc, poses a hazard to crop.
- These animals may consume crops and also roam the field in the farmer's absence , causing harm to those crops.
- This may result in a considerable reduction in yield and financial losses due to the damage.
- For this issue, an effective remedy must be developed and implemented. Our initiative seeks to aid this by developing an animal incursion alarm system, that automatically sends an alert message to the landowner. This enables early warning notice in order to take appropriate action based on the type of invader.



Objective

- Reducing human-wildlife conflict by alerting people in farm areas using video Sensor.
- Installation of video cameras on sensitive human-wildlife conflict areas (farms) with a software system that detects intrusion of animals and beeps an alarm and sends alert to the landowner (user) through mail stating when and what animals are detected, with the count.
- The primary goal of the project is to protect the agricultural area from wild animals and to safeguard them by driving them away rather than killing them.
- Additionally, the effort strives to save human life against animal assaults. To obtain great accuracy while maintaining a low latency, we want to improve the proposed system's reaction time and efficiency.



Methodology

DATATEST TRAINING :

- Installing OpenCV and ImageAI for Object Detection.
- Finding Training Data for OpenCV and ImageAI Object Detection.
- Using Pre-trained Models to Detect Objects With OpenCV and ImageAI.

ALERT MODULE :

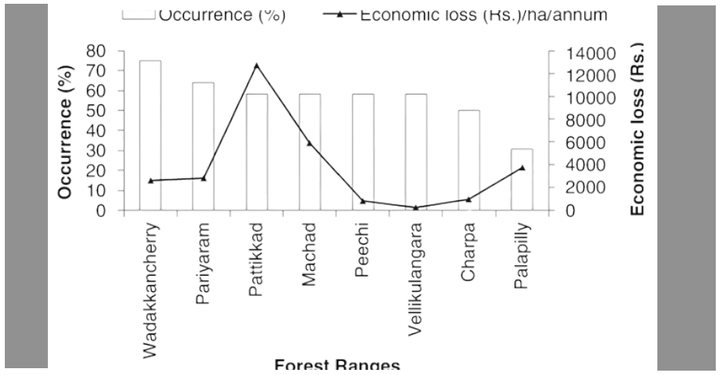
- The last module is the alert module.email will be send through SMTP.
- Email will be send using python library called as smtplib.
- If one of the trained animals is identified during the live capture, a alarm sound will be played.

Expected Outcomes

- After the implementation of this application, society will have a convenient system for alerting the farmers and other people whenever there will be any animal intrusion.
- This application with high resolution detection system, will alert the farmers and natives in the fastest way and even send an email for alert.
- The sound producing system will make a noise which will scare the animal when they try to invade the area.

Introduction

- There have been an increasing number of reports of wild animals infiltrating villages and particularly the farm lands.
- Animal intrusions result severe agricultural damage or livestock attack.
- Currently available techniques for resolving such conflicts include the construction of electric fences or the stationing of sentries to monitor for animals throughout the night. Computer vision is one such technology that has the ability to address the majority of the linked issues.
- This project's primary objective is to discuss the creation of a computer vision system capable of recognizing and tracking animals.



Conclusion

- Due to the fact that, the issues mentioned earlier continues to exist, despite the approaches used, we handled the problem by utilizing computer vision to automatically drive away the animals.
- The input to our suggested model comes from the CCTV (Closed Circuit Television). The algorithm processes and predicts the frames received from the camera and plays an appropriate repellent sound to scare away the observed animal.
- Thus, this initiative has a huge social impact since it assist the farmers in safeguarding their farms, protect financial losses, and spare them from the wasteful activities required to preserve their fields. This may also assist in preventing frequent human-animal confrontations and the loss of human life, as well as avoiding any substantial injury to people.