A Major Project report on

**CREATING AN ALERT MESSAGE BASED ON WILD ANIMAL**

**ACTIVITY DETECTION USING DEEP LEARNING**

**Submitted in partial fulfillment of the requirements for the award of**

**the degree of**

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**in**

**ARTIFICIAL INTELLIGENCE**

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CERTIFICATE

This is to certify that the project report titled “**Creating an alert message based on wild animal activity detection using Deep learning**” is being submitted by **Doddi Karthik** bearing Roll no **(21EG506103)**, **Goda Sai Chandra** bearing Roll no **(21EG506104)**, **Mohammad Irfan Khan** bearing Roll no **(20EG106150),** in B. Tech IV Year II semester, *Artificial Intelligence* is a record bonafide work carried out by them. The results embodied in this report have not been submitted to any other University for the award of any degree.

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## ABSTRACT

Traditional methods of wildlife monitoring, such as periodic surveys and camera traps, struggle to provide real time data and comprehensive coverage in vast natural habitats. This hinders effective conservation efforts and exacerbates the challenges faced by forest officers and conservationists. To address these limitations, we propose an intelligent wildlife detection and alert system that leverages deep learning and instant messaging technologies. Our system utilizes YOLOv5, a state-of-the-art object detection algorithm, to automatically identify and classify wildlife species in real-time. This eliminates the need for manual surveillance, significantly reducing resource requirements and operational costs. Additionally, the system leverages edge computing capabilities to enable on-site analysis, eliminating reliance on centralized processing units and ensuring real-time responsiveness. To facilitate immediate action, our system integrates with Telegram, a widely used instant messaging platform. This feature allows for the transmission of real-time alerts to forest officers and stakeholders, including location data and identified animal species. This enables timely intervention and mitigates the risks associated with habitat degradation and illegal activities.

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## SYMBOLS AND ABBREVATIONS

CNN Convolutional Neural Network

OpenCV Open Source Computer Vision Library

CV Computer Vision

YOLO5 You Only Look Once

Bi-LSTM Bi-Directional Long short Term Memory

VGG-19 Visual Geometry Group

OCR Object Character Recognition

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