## MADADAPU HEMANTHSAI

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## PROFESSIONAL EXPERIENCE

<b>Project Lead,</b> Indian Airforce Academy Developed a prototype i.e. FOD detection vehicle using an EV for wobble-free movement and Nvidia Jetson Xavier Nx in combination with e-con system cameras for live video processing and custom yolov8 with hyperparameter tuning and fine-tuning for the detection.	01/2024 – 06/2024 Hyderabad, India
INTERN, Sclanet ∂ Deciding the image criteria, photos are gathered, labeled with the help of the LabelImg tool, and then stored on Amazon S3. Product data is gathered and stored in MongoDB concurrently.	03/2023 – 06/2023 USA
INTERN, H-Bots Built a greeting robot by combining OpenCV and facial recognition tools, putting SVMs to use, and adding IOT devices like temperature sensors, servo motors, Raspberry Pis, and Pi cameras.	03/2022 – 06/2022 Hyderabad, India

### **PROJECTS**

# Agriculture surveillance robot for detecting abnormalities in crop growth Present

Developing a rover that keeps an eye on the crops, detects unhealthy crops, alerts the farmer to potential solutions, connects them to the closest test facilities, and periodically checks the crop growth for anomalies.

## **Driver assistance system** $\mathscr{D}$ 11/2023 – 04/2024

Developing a device that can monitor the road and the driver respectively, Key features are lane detection and tracking, traffic estimation, collision warning, SOS messages, Drowsiness detection and activity detection { Smoking / Drinking }.

## **Greeting Robot** *𝔝* 03/2022 − 06/2022

Developed a Robot using face-recognition and OpenCV which recognizes the person and using pyttsx3 library it greets the person with a handshake and checks the temperature.

#### **EDUCATION**

<b>AIML Student Trainee,</b> IIIT Hyderabad <i>⊗</i> Proficient	08/2023 - 04/2024
<b>Bachelor's of Tefchnology in CSE-AI&amp;ML,</b> MLR Institute of Technology <i>⊗</i> <b>8.65 C.G.P.A</b>	2020 - 2024
<b>Board Of Intermediate in MPC,</b> Narayana Jr college 86% Percentage	2018 - 2020

## **RESEARCH WORK**

**Filed a patent,** Crop monitoring with AI based autonomous farm rover  $\mathscr{D}$ 

**Filed a patent,** Driver assistance system  $\mathscr{D}$ 

**Filed a patent,** IOT based intelligent vehicle safety system *∂* 

**Filed a patent,** IOT-sensor-based plant disease diagnosis *∂* 

**Filed a patent,** prediction of birds and analysis of endangered bird species *∂* 

**Published a research paper,** ICCCI 2023 (14 th International Conference on Computational Collective Intelligence) on an IOT and ML based interactive Robot *⊗* 

## **SKILLS**

#### AIMI. Tech Stack

Neural Networks, Deep Learning, NumpPy, Pandas, sklearn, Keras, Tensorflow, OpenCV, CNN [ResNet, yolo family], Python, Git&Github, DSA, HTML5, MySQL, Computer Networks, Operating Systems

## **Edge Computing**

Proficient using Nvidia jetson xavier nx, carrier board - 202, JetPack - v5.1.2, raspberry pi 4&5

#### **CERTIFICATES**

- Certified for completing 6 months training program on AIML by IIIT Hyderabad 

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- Certified for Completing 1st level training program of Al-ML by SAE India  $\mathscr O$
- Certified for course completion of Python for Machine Leaning by Great-Learning ℰ