

# MADADAPU HEMANTHSAI

✉ madadapu.h@northeastern.edu 📍 Boston, US 🌐 hemanth1403 📧 hemanth1403 🔗 hemanth1403

## EDUCATION

<b>Masters in AI</b> , Northeastern University 3.0/4.0 C.G.P.A	01/2025 – present Boston, United States
<b>AIML Student Trainee</b> , IIIT Hyderabad 🔗 Proficient	08/2023 – 04/2024 Hyderabad, India
<b>Bachelor's of Technology in CSE-AI&amp;ML</b> , MLR Institute of Technology 🔗 8.65 C.G.P.A	2020 – 2024 Hyderabad, India

## SKILLS

### Tech Stack

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

### Edge Computing

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

## WORK 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. The results were as follows: Achieved a Precision -> 0.93031, Recall -> 0.88235, F1 score -> 0.90569 And a notable average FPS of around 21 when deployed.	01/2024 – 12/2024 Hyderabad, India
<b>INTERN</b> , 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
<b>INTERN</b> , 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

<b>Driver assistance system</b> 🔗 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 }.	11/2023 – 04/2024
<b>Agriculture surveillance robot for detecting abnormalities in crop growth</b> 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.	09/2022 – 08/2023
<b>Greeting Robot</b> 🔗 Developed a Robot using face-recognition and OpenCV which recognizes the person and using pytsx3 library it greets the person with a handshake and checks the temperature.	03/2022 – 06/2022

## RESEARCH WORK

- Filed a patent**, Crop monitoring with AI based autonomous farm rover 🔗
- Filed a patent**, Driver assistance system 🔗
- 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 🔗

## CERTIFICATES

- AWS Cloud Practitioner 🔗
- Certified for course completion of Python for Machine Learning by Great-Learning 🔗
- Certified for completing 6 months training program on AIML by IIIT Hyderabad 🔗
- Certified for Completing 1st level training program of AI-ML by SAE India 🔗