

Naren Medarametla

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[LinkedIn](#) | [GitHub](#) | [Scholar](#) | [Website](#)

WORK EXPERIENCE

Technocrats Robotics

Programmer

April 2024 – August 2025

Chennai, TN

- Programmed the mars rover for IRC (International Rover Challenge) 2025
- Programmed the basketball playing robots for Robocon 2025

Vellore Institute of Technology

Research Intern

May 2025 – July 2025

Chennai, TN

- Researched and developed a localization algorithm for autonomous robots using neural networks

Mafkin Robotics

Machine Learning Intern

Feb 2026 – Apr 2026

Chennai, TN

- Presently working on real-time underwater image enhancement on edge devices using neural networks and 3D Mesh Reconstruction using point cloud data

EDUCATION

Vellore Institute of Technology (Chennai)

Bachelor of Technology Computer Science

Expected August, 2027

Chennai, Tamil Nadu

- 8.75/10 CGPA
- University Teaching Assistant for UCSC201P Operating Systems Fall 2025-26
- University Teaching Assistant for BACSE104 Structured and Object Oriented Programming Winter 2025-26

PROJECTS

- **EchoNext-GRU:** Designed an EF (Ejection Fraction) estimation model using a GRU and ConvNeXt architecture, achieved 5.05% MAE with human benchmark being 4 – 6%.
- **Zero-Shot DDoS Detection:** Designed a DDoS detection model using an LLM as a backbone and a 1D-Convolutional tokenizer to extract high dimensional temporal dependencies from raw network flows and mapping them into LLM's embedding space. Achieved 0.99 F1 Score on Zero-Shot testing (Paper in Progress).
- **Agribot:** An Autonomous Agricultural Robot capable of soil analysis, crop disease detection and sowing of seeds created to assist farmers in faraway regions and harsh temperatures. Reached the finals of the AgriTech Robo Challenge out of 410 teams and were given a spot at the ICDTSA 2024 conference exhibition.
- **Hallucination Detection:** built a hallucination detection pipeline for Gemma 2 by extracting latent features from Sparse Autoencoders at activations of layer 12 and layer 20.
- **Data Distribution Service (DDS):** Implemented a publish-subscribe communication model based on the middleware used by ROS utilizing multicasting for transmission of packets to multiple nodes at the same time.
- **Robosoccer:** Programmed two football playing robots controlled using DualShock controllers.

PUBLICATIONS

- [Real-Time Localization Framework for Autonomous Basketball Robots](#)

N. Medarametla, S. Mondal
arxiv preprint 2026

SKILLS

- **Languages:** Python, C++, Java
- **Technologies:** Pytorch, OpenCV, ROS2, Git, Docker, RViz, Gazebo, Numpy, Pandas, Flask

VOLUNTEERING

- IEE Robotics and Automation Society (VIT-Chennai)
- VITeach (NGO)

CERTIFICATIONS

- [International Rover Challenge 2025](#)
- [Supervised Machine Learning: Regression and Classification from Stanford Online and DeepLearning.AI](#)
- [Advanced Learning Algorithms from Stanford Online and DeepLearning.AI](#)