MARTHA SURYA TEJA

Robotics & Automation Engineer

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Warangal, Telangana

https://marthasuryateja.github.io/

martha-surya-teja

Profile

Technology-focused Robotics Engineer passionate about designing and deploying intelligent robotic and automation systems. Experienced in developing autonomous and industrial automation solutions using ROS/ROS2, Gazebo, C, Python, PLC, embedded systems, and RPA tools.

Education

09/2025 – Present
Gandhinagar, Gujarat

International Professional Master's Program in Advanced Robotics Technology
New Age Makers' Institute of Technology

02/2023 – 05/2025
Guntur, Andhra Pradesh

B.Tech (Honours) in Product Design **8.75**
Vignan's Foundation for Science, Technology & Research

08/2022 – 08/2025
Guntur, Andhra Pradesh

Bachelor's in Technology in Robotics and Automation **8.82**
Vignan's Foundation for Science, Technology & Research

05/2019 – 06/2022
Hyderabad, Telangana

Diploma in Automation & Robotics Engineering **8.88**
Central Institute of Tool Design

2018 – 2019
Narsampet, Telangana

10th (CBSE) **8.22**
Balaji Techno School

Professional Experience

10/2025 – Present
Research Park, IITGN

Project Engineer Intern
AB6 Robotics

- Simulation and validation of 3R planar manipulator control
- Developed trajectory planning and motion control pipelines for line-following and obstacle-avoidance tasks, improving autonomous navigation and execution.
- Implemented forward and inverse kinematics in Python for real-time manipulator control and integrated perception sensors for autonomous decision-making.
- Configured and tested ROS 2 controllers, ensuring stable, accurate, and reliable robot behavior in simulation environments.

12/2024 – 05/2025
Guntur, Andhra Pradesh

Teaching Assistantship
Vignan's Foundation for Science Technology & Research

- Supported coursework in Robotics and Automation, with focus on Fundamentals of Robotics, Mobile Robotics, and Robot Mechanisms.
- Delivered hands-on lab sessions and tutorials covering robotic kinematics and system modeling concepts.
- Conducted practical training in ROS, RoboAnalyzer, and Fusion 360 for robot simulation, analysis, and mechanical design.
- Assisted students with project development, debugging, and performance evaluation, ensuring effective understanding of theoretical and practical robotics concepts.

Projects

10/2025 – Present

Development of Teleoperation Controller Module

- Modelled and fabricated a custom chassis using SLA & FDM 3D printing technology.
- Established unilateral, bilateral, and virtual wall control modes.
- Applied PID-based control for stable and precise teleoperation.

09/2025 – Present

Design & Control of Warehouse mobile robot

- LiDAR-based navigation for accurate environment mapping and obstacle detection.

- Material handling robot for efficient automated transport and manipulation.

02/2024 – 05/2025 **Autonomous Rover with Rocker-Bogie Mechanism**
- Engineered and fabricated a rover capable of carrying 30 kg payload.
- Achieved slope climbing up to 18° and traversal over uneven terrain.
- Applied ROS-based autonomous control on Raspberry Pi.
- Fabricated ~80% of the chassis using ABS and PLA to optimize strength-to-weight ratio.

11/2023 – 05/2025 **A Semi-Humanoid Robot with Autonomous Capabilities**
- Architected and built a semi-humanoid robot with 6-DOF arms.
- Integrated facial recognition using OpenCV for human–robot interaction.
- Programmed gesture-based motions including salute, pick-and-place, and greetings.

Skills

Technical
- Robot Operating System (ROS), OpenCV, CAD Modelling, Robotic Process Automation (RPA).

Computer Languages
- C, Python

Development Boards
- Arduino, Raspberry Pi, Jetson Nano

Soft Skills
- Communication, Project management, Adaptability, Initiative

Courses

07/2024 – 10/2024 **Metal Additive Manufacturing**
NPTEL

01/2024 – 03/2024 **Wheeled Mobile Robotics**
NPTEL

08/2023 – 10/2023 **RPA Using Uipath Course**
NAASCOM

01/2023 – 04/2023 **The Joy of Computing Python**
NPTEL

Certificates

Certified Robotic Process Automation Practitioner
Henry Harvin Education

Preliminary English Test
Secured B-1 level in English proficiency, Cambridge University

Achievements

Secured 1st Place in Robot System Integration at the IndiaSkills 2025 State Competition.
National Skill Development Corporation (Telangana State)

ISRO Robotics Competition 2024
IROC-U 2024
Cleared Quals Round in the competition

STUDENT SEED GRANT
Vignan's Foundation for Science Technology & Research
An amount of Rs. 1.9 lakh was sanctioned for "Design & Development of Low-Cost Multifunctional Robot"

AIR 4 in Janatics Skill Automation Competition 2023
Janatics India Private Limited
Integration of Modular Manufacturing System in simulation and real-world

Languages

- English (Read, Write, Speak)
- Telugu (Read, Write, Speak)
- Hindi (Read, Write, Speak)