BARGAVAN R

PRE FINAL YEAR, ROBOTICS STUDENT

CONTACT

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EDUCATION

2020-2022

ANNAMALAIYAAR MATRIC. HR. SEC. SECHOOL

- HSC
- Grade: 95.1%

2023-2027

MIT, ANNA UNIVERSITY

- B.E. Robotics and automation Engineering
- CGPA: 8.32 (till sem 4)

SKILLS

- Robot Operating system
- Python , C/Embedded C
- Computer Vision ,Opencv
- PLC, HMI
- CAD(Solidworks, Pro-E)
- Gazebo , Isaac sim
- Machine Learning
- Matlab
- Linux , Git, Github
- Pixhawk, Jetson Nano , Raspberry Pi

LANGUAGES

- English (Fluent)
- Hindi (Basics)
- Telugu (Fluent)

ABOUT ME

Robotics and Automation Engineer skilled in Swarm Robotics, AI/ML, ROS2, SLAM, and Computer Vision, with experience in simulations, hardware integration, and autonomous systems.

WORK EXPERIENCE

- **Industrial Robotics Intern**

  Epson India Pvt. Ltd | Bengaluru, IN Jun 2025 – July 2025
  - Developed an Automated Vending Machine with robotic integration.
  - Performed HMI testing with force-sensor integration for robotic precision control.
  - Designed LED inspection automation for quality assurance in production.

  Applied Skills: Industrial Robotics, HMI, Sensor Integration, Automation, Mechatronics, Testing , RC+ Simulation , 6 Axis and SCARA Robot Programming.

- **ROBOTICS & COMPUTER VISION INTERN**

  Astra Industrial Robotics | Chennai, IN May 2025 – Jun 2025
  - Developed a real-time hand-tracking algorithm for monitoring process adherence at Lucas TVS.
  - Optimized vision-based monitoring to improve efficiency and reduce manual inspection.

  Applied Skills: Computer Vision, Python, OpenCV, Robotics, Real-Time Processing, Industrial Automation.

- **COMPUTER AIDED DESIGN INTERN**

  Karthikesh Robotics Pvt. Ltd | Chennai, IN July 2025 – Aug 2025
  - Collaborated with cross-functional teams to translate design concepts into working models.

  Applied Skills: CAD, SolidWorks, Mechanical Design, Team Collaboration.

PROJECTS & ACHIEVEMENTS

- **Warehouse Drone – E-Yantra Robotics Competition 2024-2025**
  - Developed and optimized autonomous drone navigation for warehouse automation using ROS2 and Computer Vision. Implemented path planning and obstacle avoidance algorithms, enhancing navigation efficiency. **Ranked in the top 45 out of 800+ teams** after successfully completing all software rounds.
  - **Technologies**: ROS2, Python, OpenCV, Gazebo, RViz, PID Control
- **ISRO ROBOTICS CHALLENGE 2025 – ADVANCED ROUNDS 1 & 2**
  - Developed GPS-Denied Autonomous Drone for terrain mapping on extraterrestrial surfaces using VIO.
  - **Technologies**: ROS2, Python, OpenCV, Gazebo, RViz, PID Control, PX4/Ardupilot, MAVROS,Visual-Inertial Odometry (VIO), LiDAR Mapping
- **BinManager – Robotic Waste Handler (Ongoing,Funded By CSRC)**
  - Developing an autonomous wheeled robot with a manipulator arm for waste segregation using ROS2, computer vision, and deep learning. Integrated SLAM, motion planning, and onboard storage to enable safe, efficient, and sustainable waste management.
  - **Technologies**:ROS2, Python, C++, OpenCV, Deep Learning (CNN/Transformers), SLAM, Motion Planning, Gazebo, RViz

VOLUNTEER & ACTIVITIES

- NSS Best Volunteer of the year
- TRS (The Robotics Society)- Member
- MITRA - Competitive Robotics Co-Head
- Placement Representative for B.E.R&A(2027 Batch)