

Sarath Chandiran M

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EDUCATION

Rajalakshmi Engineering College

B.E. Robotics and Automation (86%)

Chennai, India

Nov. 2022 – May 2026

Higher Secondary School

Class XII – 93%

Tamil Nadu, India

2021 – 2022

EXPERIENCE

Computer Vision Intern

Griffyn Robotech

Mar. 2025 – Present

Pune, India

- Developed OpenCV and PyTorch-based pipelines for object detection, tracking, and industrial inspection.
- Deployed optimized deep learning models on Jetson Nano and Raspberry Pi for real-time inference.
- Reduced false positive detections by 20% through hyperparameter tuning and data augmentation.
- Implemented end-to-end annotation, training, and deployment workflow for custom datasets.

ROS2 Developer Intern

Karthikesh Robotics

Dec. 2024 – Jan. 2025

Chennai, India

- Integrated ROS2 with vision pipelines to enable autonomous navigation and object recognition.
- Enhanced obstacle detection accuracy using sensor fusion (LiDAR + vision).

PROJECTS

Vision-Based Robotic Perception System | ROS2, PyTorch, OpenCV, Jetson Nano

2023 – 2025

- Developed real-time perception pipelines for robotic inspection and assembly tasks.
- Integrated YOLOv8 models into ROS2 nodes for part detection, screw classification, and automated pick-and-place.
- Optimized inference on edge devices using TensorRT achieving 30% faster runtime.

Yarn Thread Defect Detection System | OpenCV, PyTorch, Industrial Cameras

2023

- Implemented computer vision system to detect yarn defects (cuts, knots, irregularities) in real time.
- Integrated detection pipeline with automated textile machinery to reduce manual inspection workload.
- Achieved 95% accuracy on production datasets through augmentation and fine-tuning.

Vision-Guided Robotic Arm for Smart Assembly | ROS2, OpenCV, MoveIt, Arduino

2023

- Built a 6-DOF robotic arm with visual servoing for automated pick-and-place operations.
- Implemented real-time object recognition with OpenCV and ROS2 for accurate grasping of screws and components.
- Reduced assembly cycle time by 25% compared to manual operation.

Autonomous Industrial Inspection System | PyTorch, OpenCV, Jetson, ROS2

2023 – 2024

- Designed an AI-powered inspection system for detecting defects on assembly lines using high-resolution cameras.
- Implemented detection, segmentation, and anomaly models, achieving 92% defect detection accuracy.
- Deployed on NVIDIA Jetson devices for real-time edge inference, reducing human inspection load.

AI-Powered Industrial Object Sorting | PyTorch, OpenCV, Jetson, Robotics

2023 – 2024

- Developed a real-time vision system for sorting industrial components by shape, size, and defect detection.
- Integrated deep learning models with robotic pick-and-place arms, achieving 90% sorting accuracy.
- Optimized edge deployment on Jetson Nano for sub-200ms latency, improving production efficiency.

TECHNICAL SKILLS

Programming & ML: Python, C++, OpenCV, PyTorch, TensorFlow, NumPy, Pandas

Computer Vision: YOLO, Object Detection, Segmentation, Image Classification, Data Annotation

Robotics & CV Integration: ROS2, Gazebo, RViz, MoveIt, LiDAR, SLAM, Embedded Vision

3D Design: SolidWorks, AutoCAD

Open Source Contributions: Contributed to Labelling, YOLO model improvements, and community-driven CV projects

Developer Tools: Git, Docker, Jupyter, VS Code, Linux/Ubuntu

Others: Edge Deployment, TensorRT Optimization, Embedded Systems, CNC Programming