

# Sridhar Jagadesan

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## Summary:

Robotics & Automation Engineer with early-career experience in manufacturing systems, process optimization, and robotic system design. Improved production efficiency by analyzing operations data and deploying real-time monitoring solutions in regulated environments and contributed to the design and navigation of autonomous mobile robots. Skilled in Lean practices, OEE improvement, and automation tools such as ROS2. Eager to leverage robotics and automation expertise to drive efficiency and innovation in engineering roles.

## Education:

**Drexel University, Philadelphia, Pennsylvania, USA**

Sep 2024 - June 2026

Master of Science in Robotics and Autonomy

College Of Engineering Dean's Scholarship

CGPA – 3.56

**PSG College of Technology, Coimbatore, Tamil Nadu, India**

October 2020 - June 2024

Bachelor of Engineering in Robotics and Automation

CGPA - 7.98/10

## Experience:

**PCI Pharma Services, Philadelphia, PA**

*Engineering Co-op* | Sept 2025 – Mar 2026

- Analyzed production data using MES/OEE tools to identify downtime drivers, improving line efficiency by 10%
- Deployed Raven.ai system enabling real-time OEE monitoring, reducing manual tracking efforts by 8 hours/week
- Supported process validation (IQ/OQ/PQ) and new product introduction in a cGMP-regulated environment
- Conducted root cause analysis (RCA) to resolve bottlenecks and improve throughput
- Implemented Lean and 5S methodologies, improving workspace efficiency and reducing cycle time

**Pricol Industries Ltd, India**

*Mechanical Engineering Intern* | Jan 2024 – Apr 2024

- Designed mechanical structure of an Autonomous Mobile Robot (AMR) using Solidworks
- Developed ROS2-based navigation for industrial deployment by integrating SLAM algorithms
- Optimized towing and tugging mechanism, resulting in smoother operations and higher load capacities

## PROJECTS

**Toilet Cleaning Robot – Final Year Project (Lead)**

- Designed and developed an autonomous robotic system using sensor-based navigation and BLDC motor control
- Built full mechanical design using Solidworks and implemented control logic
- Integrated embedded systems for real-time motion control

**RC Electric Vehicle for Sustainable Weeding – Project Lead**

- Designed and simulated battery-powered RC EV for eco-friendly agricultural weed control
- Conducted feasibility study on sustainable farming alternatives

**ICAARS 2022 – Motion Planning Research Presentation**

- Compared traditional and ML-based path planning algorithms
- Identified optimal collision avoidance techniques across platforms

## TECHNICAL SKILLS

**Programming:** Python, C, MATLAB

**Robotics:** ROS, ROS2, OpenCV, SolidWorks, AutoCAD, Path Planning, SLAM, Sensor Integration

**Manufacturing & Industrial:** Lean Manufacturing, Six Sigma (basic), OEE, MES, Process Validation, GMP

**Controls & Automation:** Siemens S7-1200/1500 PLC, TIA Portal, FANUC NC Guide

**Hardware & Tools:** Arduino, 8051, CNC Machines, Universal Robots, Kinova Jaco 2, PyCharm, Proteus, MultiSIM