

# Sanjeev S. Godbole

[godbole.sanjeev@gmail.com](mailto:godbole.sanjeev@gmail.com) | [linkedin.com/in/sanjeevgodbole](https://www.linkedin.com/in/sanjeevgodbole) | [sanjeevgodbole.github.io](https://github.com/sanjeevgodbole) | (408) 640-5600

## EDUCATION

### Santa Clara University

*Master of Science in Robotics and Automation*

Selected Coursework: Advance Mechatronics, Advance Driving Assistance Systems, Artificial Intelligence, Reinforcement Learning

Santa Clara, CA

June 2026

### Birla Institute of Technology and Science

*Bachelor of Technology*

Selected Coursework: Mechatronics and Automation, Engineering Design, Essentials of Project Management, IOT in Manufacturing

Pilani, IN

Jan 2024

## SKILLS

**Programming Languages:** Python, Matlab, KAREL (FANUC), RAPID (ABB), KRL (KUKA), INFORM(YASHKAWA)

**Software, Simulation and AI:** ROS/ROS2, Isaac Sim, Gazebo, Linux Git, OpenCV, TIA Portal, YOLOV8, Docker, Jira, E-Plan, Fusion360, CAD

**Hardware and Platforms:** NVIDIA Jetson Orin Nano, SICK, Cognex, Hikvision, iRayple, Keyence

**Core Concepts and Design:** Robotics system engineering, Hardware-software integration, Electromechanical Debugging, HMI Design

Digital Twins, Virtual Commissioning, HIL Validation, Sensor Fusion, Kalman Filtering

**Functional Safety and Standards:** ISO 12100, ISO 13849, IEC 62061, IEC 60204, ISO 26262

**Professional Skills:** Project Planning and Management, Risk Mitigation, Stakeholder Alignment, Cross Functional Leadership, Negotiation

## EXPERIENCE

### Unbox Robotics

*Robotics Systems Engineer*

Pune, IN

July 2022 – June 2024

- Boosted **Automated Guided Vehicles (AGV's) cycle times by 5%** by orchestrating electromechanical-software integration and refining sensor-to-control feedback loops.
- Enhanced **obstacle detection** and **diminished manual recalibration by 40%** through multi-brand vision system (SICK, Cognex Keyence) and LiDAR integration.
- Boosted AGV drivetrain **efficiency by 20%** by spearheading BLDC motor (Maxon) and sensor testing/ implementation.
- Accomplished **high system uptime** by designing **Siemens S7-1200 PLC** control logic for robotic systems, synchronizing mechanical and software workflows to minimize downtime.

### Lemon Robotics

*Senior Robotics Engineer*

Pune, IN

Sep 2021 - June 2022

- Improved car **assembly productivity by 15%** via deployment of 3D vision-guided robotic arms (Fanuc, ABB).
- Delivered custom automation solutions, **cutting down cycle times and ensuring 99.5%** system reliability through client requirement translation.
- Standardized QC station electrical layouts with E-Plan schematics, minimizing wiring **errors by 30% and accelerating commissioning by 3 weeks/project**.

### Velankani Electronics

*Member of Technical Staff*

Bengaluru, IN

July 2020 - Sep 2021

- **Slashed manual PCB handling by 50%** and **boosted line productivity by 20%** by automating workflows with **Fanuc LR Mate 200iD robots**.
- **Simplified PCB defect escape rates by 35%** by deploying Cognex vision inspection systems for real-time quality assurance.
- **Increased throughput and decreased equipment downtime** by championing cross-functional PCB process redesign.

### Wipro PARI

*Member of Build Controls*

Pune, IN

July 2018 - July 2020

- **Attained  $\pm 0.05\text{mm}$  repeatability and 99.9% process accuracy** by programming FANUC, YASKAWA, ABB, and KUKA robots for automotive assembly.
- Refined 5+ automotive assembly lines (JCB, TATA, HERO MOTO CORP), increasing throughput by 30% within 8 months and facilitating 500K+ annual unit production.
- Decreased operational errors and rework costs by redesigning robotic tooling workflows.

## PROJECTS

### Industrial Digital Twin for Virtual Commissioning

- Architected an industrial digital twin integrating a Siemens PLC with Isaac Sim via ROS 2 and OPC UA, slashing projected commissioning time by 40% and optimizing cycle time by 15% through virtual validation.

### AI-Driven Robotic Grasping in Cluttered Environments

- Developed a perception-to-action pipeline on a Jetson Orin Nano using PyTorch, achieving a 95% grasp success rate and validating real-time performance via Hardware-in-the-Loop (HIL) simulation.

### Warehouse Dimensioning System

- Reduced warehouse sorting errors by 25% by automating parcel dimensioning with  $\pm 5\text{mm}$  accuracy using a SICK 3D camera and point cloud processing.

## CERTIFICATIONS

- **Advanced Driver Assistance Systems (ADAS)** - Udemy
- **Getting Started with AI on Jetson Nano** - NVIDIA
- **OpenCV Bootcamp** - OpenCV University