

SAURABH SANTOSH DUKARE

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Pune

ABOUT ME

Aspiring Mechanical Design Engineer with hands-on experience in robotics, prototyping, and CAD modeling, passionate about exploring advanced concepts in Robotics, Aviation, and Automotive sectors to develop innovative and efficient engineering solutions

EDUCATION

D.Y. Patil College of Engineering, Akurdi B.E. - Robotics & Automation CGPA: 7.91 / 10	2022 - 2026
Sant Mai Junior College, Pune 12th maharashtra board Percentage: 66.60 / 100	2020 - 2022
Kukadi Valley Public School, Yedgaon, Junnar 10th CBSE Percentage: 85.80 / 100	2020

PROFESSIONAL EXPERIENCE

Freelance

- Designed and developed autonomous and IoT-enabled robotic systems using Arduino and ESP32, integrating vision systems, DC/BLDC motors, servo actuation, motor drivers, and Wi-Fi control with Embedded C.

DRAIC

- Contributed as a Member in DRAIC Club, Worked on the design and development of robotic systems, handling both mechanical and embedded components, including microcontrollers, sensors, motors, motor drivers, communication protocols, and real-time operating systems.

INTERSHIPS

ORO Robotics And Automation

01 Aug, 2025 - 31 Jan, 2026

Automation Designer

- Designed conveyors for **Emerson** as part of automation project requirements.
- Designed gauges for **Pranav Vikas (Bajaj Radiators)** for inspection and quality applications.
- Designed automotive panel checkers for **Wadhokar Group** for parts supplied to **Mahindra** and **Tata Motors** And Oil Trays for **Dana India Pvt.Ltd**
- Designed SPM machines, fixtures, material-handling trolleys, and Robotic cells.

3D Wizard

01 Oct, 2024 - 31 Mar, 2025

Design and Prototyping

- Conducted R&D on **India's largest 3D printer**, researching sensor integration (thermistors, cameras), motors (NEMA 23), and control systems to optimize performance and precision.
- Developed high-fidelity defense prototypes including missile systems, launchers, UUV submarine concepts, ammunition models, and UAV platforms for **Adani Defence and Aerospace** and **MIL Khadki**, showcased at **Aero India 2025**, Bengaluru.
- Worked on defense and industrial projects for **L&T Defence** and **Godrej**, designing products and prototypes using CAD, 3D printing, vacuum casting, and additive manufacturing.

PROJECTS

DESIGN AND DEVELOPMENT OF SORTING SCARA ROBOT

01 Dec, 2025 - continue

- Design and develop a SCARA robotic arm for automated sorting applications.
- 2. Developed a conveyor-based automated shirt packaging system integrated with SCARA robot automation using rfid

Ware house management

15 Feb, 2024 - 19 Apr, 2024

- Developed a lightweight Warehouse Management System prototype with automatic storage/retrieval, integrating Arduino Mega, NEMA 17 stepper motors, stepper drivers, RFID scanners/tags, and embedded C programming.

3D printer

01 Mar, 2023 - 20 Apr, 2023

- Built a fully functional 3D printer from scratch, designing an aluminum chassis with precision tolerances and integrating 4 NEMA 17 stepper motors, bearings, couplers, and mechanical drive systems. Gained hands-on experience through iterative testing and used Proteus for simulation.