

# SHIVAAN SOOD

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## PROFESSIONAL SUMMARY

**Mechanical Engineer specializing in controls, robotics, and system automation.** Experienced in diagnosing complex, cross-disciplinary problems — from embedded software integration to process optimization — and implementing end-to-end solutions. Proven communicator and collaborator through leadership roles and technical teaching, driven to translate engineering skills into impactful solutions for global systems.

## EDUCATION

**University of California - San Diego**  
*Bachelor's, Mechanical Engineering*

- Specialization in Controls & Robotics; Relevant Coursework: Control Systems (MAE 143A/B), Probability & Statistics (MAE 108), Autonomous Vehicles (MAE 148), Experimental Techniques (MAE 170), MATLAB Programming (MAE 8)

**March 2026**

## PROFESSIONAL EXPERIENCE

**iD Tech**  
*AI and Machine Learning Instructor (UCLA and Caltech)*

- Diagnosed and resolved technical issues in real-time while guiding students through AI/ML and embedded robotics projects using NVIDIA Jetson and Python.
- Simplified complex concepts like model training, inference, and computer vision deployment for non-technical audiences, ensuring successful project outcomes.
- Guided 22 students through data collection, embedded integration, and live debugging across hardware, software, and network layers.
- Consistently earned 95%+ parent and student satisfaction ratings and was recognized by program leads for professionalism, reliability, and high student engagement.
- Balanced technical instruction with mentorship and logistical coordination in a high-intensity, customer-facing environment.

**Los Angeles, CA, USA**  
*July 2025 - August 2025*

**Brains & Motion Education**  
*Part-Time Robotics Instructor*

- Delivered robotics and coding instruction to K–8 students, adapting complex engineering concepts into clear, engaging lessons for diverse learning levels.
- Troubleshot hardware and programming issues in real time across platforms like LEGO Spike, VEX, and Arduino-based systems, ensuring every team successfully completed builds.

**San Diego, CA**  
*October 2024 - April 2025*

**Capgemini**  
*Process Engineer Internship*

- Diagnosed workflow inefficiencies across multiple business units and engineered automated solutions using Microsoft Power Apps, Power Automate, and Excel VBA.
- Designed and deployed an internal application suite that cut escalation response times by 15% and streamlined cross-team communication.
- Built a VBA-driven data management tool that reduced processing time by 30% through logic automation, input validation, and exception handling.
- Collaborated with stakeholders to test, debug, and integrate solutions into live production systems, improving overall reliability and data accuracy.
- Recognized by supervisors for analytical rigor and a proactive approach to problem solving—key traits for technical implementation and customer support.

**Noida, India**  
*August 2023 - December 2023*

**RoboClub**  
*Head Coach — World Robotics Olympiad*

- Designed and implemented a robotics training curriculum emphasizing system design, coding, and real-time problem solving for student teams competing in the World Robotics Olympiad.
- Mentored and coordinated multiple teams to analyze performance issues, debug programs, and iterate mechanical designs, resulting in two rookie teams advancing to the India Nationals in their first year.
- Facilitated collaboration between software and hardware subteams, fostering structured communication and effective troubleshooting under competition time pressure.
- Recognized by program directors for technical mentorship and leadership excellence in guiding students through high-stakes, deadline-driven challenges.

**New Delhi, India**  
*June 2023 - December 2023*

**Unicove Technologies Pvt. Ltd.**  
*Quality Engineer Internship*

- Executed comprehensive QA testing to identify and document critical software bugs and UI/UX inefficiencies, improving overall platform stability and user experience.
- Collaborated with developers to reproduce issues, verify fixes, and deliver detailed test reports that enhanced release reliability and cross-team communication.

**New Delhi, India**  
*June 2021 - July 2021*

## PROJECTS & OUTSIDE EXPERIENCE

**UCSD Senior Design Project (In Progress)**  
*Maneuverable Rigid Intubating Stylet*

- Designing and prototyping a controllable intubation stylet to improve airway access during endotracheal procedures in ICU and emergency settings
- Developing a cable-driven articulation mechanism for 20° up/down tip movement with one-hand thumb control
- Conducting CAD modeling, materials selection, and manufacturability analysis for a biocompatible, single-use medical device
- Collaborating with physicians and engineers to ensure usability, reliability, and safety in high-stress clinical environments.

**San Diego, CA, USA**  
*October 2025 - Present*

**EnNoWait**  
*Co-Founder*

- Founded and led development of a patented queue-management app to reduce congestion at essential services during COVID-19; oversaw system design, UX/UI optimization, and investor presentations that improved user adoption and operational efficiency.

**New Delhi, DL, India**  
*April 2020 - July 2021*

**Team NeXT**  
*Team Captain (FIRST Robotics & World Robotics Olympiad)*

- Led competitive robotics teams for over 10 years, advancing to 6 international and 25+ national/regional competitions, earning 15 regional, 12 national, and 2 international awards through innovation in mechanical design, programming, and strategic gameplay.

**New Delhi, DL, India**  
*May 2011 - November 2019*

## SKILLS

**AI & Computer Vision:** NVIDIA Jetson Orin Nano, Tensorflow, OpenCV, RoboFlow, Model Training, Dataset Development, Inference, Real-Time Classification & Detection, CUDA

**Programming:** Embedded Linux, Python, Bash, C/C++, Git, Android Development, HTML/CSS, Java, ROS2, Docker, Kubernetes, JavaScript, Node.js, iOS/Swift, PHP, Excel/Numbers/Sheets, Power Automate, Power Apps

**Embedded:** SSH, Embedded Systems, Arduino, Raspberry Pi, Soldering

**CAD & Simulation:** SolidWorks, MATLAB, Fusion 360, AutoCAD, ANSYS, Simscape Multibody, 3D Printing

**Fabrication & Manufacturing:** 3D Printing, Makerbot, CNC, CAM, Haas Mill, Tormach Lathe, Pneumatic Systems, Welding