ROHAN SHAH

+1 (562) 939-8254 | rohan@hemanshushah.com | rohanhshah.com/

EDUCATION

University of California - San Diego   **September 2021 - June 2025**
Bachelor's, Mechanical Engineering - Controls and Robotics   *GPA: 3.92*

WORK EXPERIENCE

Contextual Robotics Institute/Fusion Engineering Institute   **San Diego, CA, USA**
Undergraduate Researcher   *September 2022 - Present*
- Worked on three different research projects in the Cyber-Physical Technology department of the Contextual Robotics Institute.
- Working on a Laser Control System in the Fusion Engineering Institute and starting a PhD here in September 2025.

Hi Tech Honeycomb   **San Diego, CA, USA**
Engineering Intern   *February 2025 - June 2025*
- Designed a system to increase resistance welding efficiency by 50% within the first month.
- In the process of implementing a system to fully automate the welding process.

University of California - San Diego   **San Diego, CA, USA**
COSMOS Cluster Assistant   *July 2024 - August 2024*
- Mentored students through diverse robotics projects, including RC, autonomous, and legged systems.
- Instructed students on robotics topics, including Raspberry Pi programming, OpenCV applications, and FSM principles.

PROJECTS & OUTSIDE EXPERIENCE

Laser Control System   **San Diego, CA, USA**
Undergraduate Researcher   *November 2024 - Present*
- Set up a laser system to observe the different wavelengths emitted by various materials under a 1064 nm Surelite laser.
- Working on a control system to adjust the laser power based on the wavelengths being emitted.
- This work has possible applications to aid in the laser boring of the fusion targets during their fueling process.

Friction Carousel   **San Diego, CA, USA**
Undergraduate Researcher   *July 2023 - December 2024*
- Worked on an independent project in the Contextual Robotics Institute, to experiment the frictional properties of rolling motion.
- Designed and fabricated a ten-wheeled carousel system, complete with automated sensing capabilities.
- Quantified multi-contact friction's near-viscous relationship. Research featured on UCSD Undergraduate Research Hub; presented at 2024 APS March Meeting. Paper submitted to PNAS: https://arxiv.org/abs/2501.09746.

Delayed Stretch Activation Wings   **San Diego, CA, USA**
Undergraduate Researcher   *August 2024 - October 2024*
- Collaborated with Georgia Tech's Agile Systems Lab to study the physics behind Delayed Stretch Activation.
- Integrated a Simulink model with a feedback control system to perform tests for verifying the DSA model.
- Presented this work at ASME's SMASIS conference 2024.

HONORS

Provost Honors
- Awarded to students maintaining a high cumulative GPA.

GEAR Scholar
- Awarded to high-performing students in the GEAR research program at UC San Diego.

ORGANIZATIONS

American Society of Mechanical Engineers at UC San Diego
January 2024 - Present |Chair
Founded the student section in the capacity of Chair of the organization, expanding ASME student membership to 50+ participants. Collaborated with other colleges for events.

SKILLS

Python, Arduino, SolidWorks, AutoCAD, Fluid Mechanics, MATLAB, ANSYS, C++, Control Systems, Simulink, CNC and Manual Machining, Resistance Welding, Laser Operation Techniques