



## Education

San Diego State University  
Bachelor of Science, *Mechanical Engineer with an emphasis in Bioengineering*

May 2024

## Qualifications

**CAD Software:** Proficient in SOLIDWORKS, Matlab, Onshape, AutoCAD  
**Programming Languages:** C++  
**Software Proficiency:** LabVIEW, Arduino IDE, Google Suite, Microsoft Office and Excel  
**Laboratory:** Level 2A Lithography Certification (experience with nano-fabrication processes)  
**Bilingual:** Fluent in Spanish

## Academic Achievement & Awards

**Dean's List Student Recognition**, San Diego State University (SDSU), San Diego, CA *Spring 2021*  
**EOPOS Academic Achiever**, San Diego State University (SDSU), San Diego, CA *Fall 2023*  
**Shiley Scholarship in Bioengineering scholarship awarded**, San Diego State University (SDSU), San Diego, CA *Summer 2022*  
**SD SHPE scholarship awarded**, San Diego SHPE Professionals, San Diego, CA *Summer 2022*

## Professional Experience

**SDSU MESA K-12th Student Outreach Office Assistant**, San Diego State University, San Diego, CA *Spring 2024 - Summer 2024*

- Coordinate outreach initiatives and manage logistics for MESA activities.
- Enhance student engagement through organized engineering facility tours for groups of up to 30 high school students.

**Presenter & Researcher, S3 SDSU Research Symposium & Research Assistant, NanoFab Lab**, SDSU, San Diego, CA *Fall 2023 - Summer 2024*

- Presented research on Glassy Carbon Field Effect Transistors for bio-analyte detection
  - Addressing current technology gaps in cortisol, glucose, troponin, & NT-proBNP monitoring.
- Assisted in improving biosensor technology by researching and shadowing a professional in electrochemistry.

**Internship at NanoFab, SDSU Lab**, San Diego State University, San Diego, CA *Summer 2023*

- Attained a certificate training program for level 2A lithography
  - Experience in making the first layer of MEMS device via multilayer lithography, encompassing spin coating, mask alignment, plasma etching, photoresist development, and pyrolysis
- Developed a microfluidic chip prototype for biological applications, utilizing OnShape CAD software and prototype development skills.

**Office Administrative Intern, Locanabio**, La Jolla San Diego, CA *Summer 2023*

- Supervised building entrances, issued visitor passes, and ensured compliance with company guidelines.
- Managed office logistics, including reception, mail distribution, and bi-weekly meetings.
  - Time at the internship site sparked my curiosity in gene therapy research expanding my interest in the biotechnology field

## Projects

**Cortisol Monitor Research, NanoFab SDSU Research Student**, San Diego State University, San Diego, CA *Aug. 2023 - May 2024*

- Analyzed current cortisol monitoring technologies and identified improvements using bioengineering principles.
- Identified gaps in technology, focusing on analyte detection methods, life cycle, targets of functionalization, electrode material, and detection methods.
- Research aims to improve biosensor technology for wearable devices monitoring cortisol and glucose.

**Project Manager, Ergonomics Jig for Aztec Electric Racing (AER) Senior Design Project**, San Diego State University, San Diego, CA *Aug. 2023 - May 2024*

- Led a team of four in designing ergonomic components for racing equipment during 9 months.
- Developed a new ergonomics jig component for AER, which is user-friendly, lightweight, and durable due to the Delrin material used in the seat slider.

## Leadership & Outreach

**President, Society of Hispanic Professional Engineers at SDSU (SHPE)**, San Diego, CA *Fall 2023 - May 2024*

- Supervised the 13-member SDSU SHPE board to strategize and execute events for students entering the professional workforce.
- Highlights: Sponsored 25 SHPE members to the National Conference in Salt Lake City, increased membership retention by 10%, hosted a GBM with 60 members, organized a high school conference for 80 students, and launched MentorSHPE pairing 25 members with professionals from companies like Qualcomm & Illumina.
- Full report and presentation can be found here: [SHPE SDSU 2023-2024 Final Report](#) , [ASML SHPE SD GBM](#)

**Outreach Coordinator, Society of Hispanic and Professional Engineers (SHPE)**, San Diego, CA *Fall 2022 - May 2023*

- Conducted Arduino workshops for tabling events and Night of Science workshop events for our Junior Chapters including Otay Ranch High School and organized outreach events for youth empowerment.

**Active Member, Society of Hispanic and Professional Engineers (SHPE)/SD Professional chapter**, San Diego, CA *Spring 2022 - Present*

**Active Member, Society of Women Engineers at SDSU (SWE)**, San Diego, CA *Fall 2021 - Present*

## Skills & Competencies

- Technical Documentation: Skilled in preparing, maintaining, and modifying technical documents.
- Vendor Coordination: Experienced in managing engineering change orders with third-party vendors and machine shops.
- Professional Communication: Able to maintain professional relationships with diplomacy and tact.
- Analytical Abilities: Strong skills in troubleshooting, testing, and debugging electronic and mechanical systems.