EDUARDO SALAZAR

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EDUCATION

University of California Los Angeles — Los Angeles, CA
Bachelor of Science in Mechanical Engineering — *June 2025*
GPA: 3.82

EXPERIENCE

XELA ROBOTICS — Tokyo, Japan
Robotics Engineer Intern — *Jun 2025 - Current*

- Designed and prototyped tactile sensing systems for advanced robotics applications using **SolidWorks** for mechanical design and **KiCAD** for PCB development, ensuring proper **GD&T** and manufacturability.
- **Managed procurement tracking** and financial reporting for engineering-related orders and deliverables, ensuring alignment with project budgets and timelines.
- Facilitated **technical communications** between engineering teams, company leadership (CEOs), and external vendors — translating complex system requirements and integration milestones into actionable deliverables.
- Integrated **Linux** based custom **software and hardware** across robotic arm platforms and embedded sensing systems, contributing to system-level testing, debugging, and deployment of early-stage prototypes.
- **Researched, selected, and validated** materials, actuators, and sensing components to meet performance, durability, and cost requirements.

UNIVERSITY OF CALIFORNIA LOS ANGELES — Los Angeles, CA
Controls Engineer - Surgical Robotics — *Sep 2024 - Jun 2025*

- **Designed and modeled** mechanical systems in **SolidWorks** (syringe/end effector and quick tool-changing mechanism for the IRISS surgical robot).
- Development and deployment of a **machine learning** pipeline using **PyTorch** to classify OCT images of ocular structures for real-time surgical assistance, achieving **98% classification accuracy** and predicting distance within **50 um accuracy**.
- Utilized **LabVIEW** for hardware control and system optimization during real-time operations.
- Collaborated with multidisciplinary teams, including surgeons, software developers, and hardware engineers.

UNIVERSITY OF CALIFORNIA LOS ANGELES PHYSICS — Los Angeles, CA
Simulation Engineer — *Jun 2024 - Oct 2024*

- Duties consisted of modeling quasi-optical components in **Solidworks** and **COMSOL multiphysics**.
- Conducting full-wave **3D simulations** of millimeter-wave optical components such as lenses, focusing mirrors, and metal lenses for testing and design in nuclear fusion experiments.
- **Optimized designs** through simulation to improve performance, resulting in significant cost savings for the team.

STANFORD UNIVERSITY SCHOOL OF ENGINEERING — Stanford, CA
Undergraduate Research Fellow — *Jun 2023- Aug 2023*

Project: Developed a medical device to mechanically stretch the heart for children born with congenital heart defects.

- **Design and prototyping** pediatric cardiac devices.
- Interface with a clinical team conducting animal tests.
- Rapid prototyping, **3D printing**, **CAD**, molding, nitinol forming, **FEA analysis**.

UNITED STATES NAVY - HOSPITAL CORPSMAN — Camp Pendleton, CA
Senior Navy Medic — *Nov 2015- Dec 2020*

Served as the senior medical personnel for an infantry company of 300 Marines, responsible for comprehensive healthcare.

- Trained Marines, Corpsmen, and foreign military forces in advanced **combat medicine**.
- Acted as a liaison between Marine and Navy command structures and engaged with foreign military entities.
- Consistently ranked at the top of class evaluations, earning early promotions due to exceptional competency and **leadership**.
- Led and maintained composure in high-stress, dangerous situations, ensuring the safety and well-being of personnel.

TECHNICAL SKILLS

Computer: Python, C++ (beginner), Matlab, Git, COMSOL Multiphysics.
CAD: Fusion 360, OnShape, SolidWorks, ANSYS, KiCAD.