

AARON LI

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Education

Stanford University | *Master of Science in Mechanical Engineering* Expected June 2027
GPA: 4.00/4.00; Depth in Mechatronics, Breadth in Design & Manufacturing

University of California, Los Angeles | *Bachelor of Science in Engineering* Conferred June 2025
GPA: 3.95/4.00; *magna cum laude*

Technical Skills

Software/CAD: Autodesk Fusion 360, SolidWorks, Onshape, KiCad, Minitab, C/C++, Python, JavaScript, MATLAB
Manufacturing: Lathe, Mill, Welding, Laser Cutting, FDM & SLA 3D Printing

Engineering Experience

Product Realization Lab (PRL) at Stanford University | Stanford, CA 09/26 – Present
Course Assistant

- Mentor students in the design, fabrication, and testing of hands-on engineering projects using machining, welding, additive manufacturing, laser cutting, and rapid prototyping tools.
- Provide technical instruction and laboratory support for engineering design courses.

Johnson & Johnson MedTech | Santa Clara, CA 06/26 – 09/26
R&D Systems Verification Engineering Intern

- Supported development and execution of Verification testing for OTTAVA Surgical Robotic System.
- Developed a Python/YAML automated configuration-management tool for a distributed robotic system and accompanying pytest-based validation framework for 25+ automated test cases.
- Designed and prototyped robotic test fixtures in SolidWorks for system-level verification testing.

Center for Advanced Surgical & Interventional Technology at UCLA | Los Angeles, CA 03/24 – 06/25
Undergraduate Researcher – Haptic Sensors for Robotic Surgery

- Developed haptic sensors for the da Vinci Surgical Robotic System using FBG sensing to detect tissue stiffness.
- Designed method to measure grasping kinematics from robotic forceps using optical encoders.
- Devised protocol for customized forceps compatibility within da Vinci System for experimental data collection.

BMES at UCLA | Los Angeles, CA 04/23 – 06/25
Technical Project Manager/Lead

- Led 40+ students across different projects focused on smart wearable technology.
- Spearheaded workshops on coding, circuitry, computer-aided design, printed circuit board design, and soldering while guiding students in building their own medical devices from scratch.
- Designed and maintained year-long project timelines and curricula while managing \$4,500+ in funds.
- Coordinated with faculty and alumni for technical mentorship and timeline execution.

Johnson & Johnson MedTech (Shockwave Medical) | Santa Clara, CA 06/24 – 08/24
R&D Systems Engineering Intern

- Created and performed product testing for Class II & III medical device within Product Development Process.
- Executed device qualification for Verification & Validation testing through failure analysis of prototype builds.
- Implemented automated defect management analysis tool for device requirements, reducing workload by 50%.

Projects

Autonomous Ball-Manipulating Robot 2/26
Stanford Smart Product Design Applications (ME218B) Final Project

- Designed and built an autonomous robot system using a PIC32-based circuit with IR sensors, DC motors with encoders, and Servo motors programmed by embedded C to navigate a field and manipulate rubber balls.

Haptic Block Stacking Arcade Game 05/26 – 06/26
Stanford Design and Control of Haptic Systems (ME327) Final Project

- Designed and fabricated an arcade game that provided haptic feedback when stacking virtual game blocks using DC motors with encoders, ERM motors, linear rail, ATmega328 microcontroller, and Processing IDE.

PlanTable – Wood Top Table with Steel Legs 10/25 – 12/25
Stanford Design and Manufacturing (ME203) Final Project

- Designed and manufactured a plant-holding table using manufacturing processes such as manual milling, TIG welding, sand casting, laser cutting, 3D printing, and woodworking.

Interests: Backpacking, bouldering, landscape photography, and budget traveling