Julia Abboud

juliaabboud@gmail.com | 303-501-4025 | Boulder, CO | Portfolio: juliaabboud.com

EDUCATION

BS in Mechanical Engineering, University of Colorado Boulder Graduation Date: May 2027
Minors: Engineering Management & Engineering Entrepreneurship GPA: 3.989
Relevant Courses: Component Design, Thermodynamics, Fluids, Mechanics of Solids, Materials Science, CAD, Circuits
Awards: Norlin Scholar, Esteemed Scholars Program, Dean's List

SKILLS

Technical: Digital Art (5 yrs), NX (500+ hrs), SolidWorks (CSWA, 220+ hrs), Lab Skills (180 hrs), Lathe/Mill (70+ hrs)
Programming: C++ (150 hrs), Arduino (10 hrs), MATLAB (10 hrs), HTML/CSS (15+ hrs), EES (10 hrs), Altium (4 hrs)
Languages: Seal of Biliteracy in Spanish, Conversational Arabic

ENGINEERING EXPERIENCE

Apple Watch Product Design Intern, Cupertino, CA Jan 2026 - Aug 2026

- Working on 5-10 projects at a time, mainly within the NX system CAD for 5 upcoming products
- Designing, rapid prototyping, and validating mechanical designs with custom experiments and test fixtures
- Communicating cross-functionally and with vendors in China to get parts to spec and within the tight timelines

Drill-Powered Bike, CU Boulder Sep 2025 - Dec 2025

- Served as project manager on a team of 5 to design a hand-drill-powered vehicle optimized for maneuverability
- Delivered a functional product 2 weeks ahead of schedule, 33% under-budget, and 4th place at a course-wide race
- Stepped in to resolve conflicts and fill in gaps when needed, contributing heavily to system CAD, 20+ technical drawings, manufacturing, and assembly

Medtronic R&D Intern, Oximetry & Wearables, Boulder/Lafayette, CO Jun - Aug 2025

- Prototyped a wearable sensor able to identify between 4 sites on the body based on curvature; evaluated strain gauges, flex sensors, and force sensors for performance through testing, calculations, and MATLAB analysis
- Created and 3D printed test fixtures and two 8-part assembly visual aids in SolidWorks
- Soldered sensor circuits, including a Wheatstone Bridge and Arduino, for accurate data collection and analysis
- Developed a custom strain gauge amplifier and flexible PCB circuits using Altium

Medtronic WISE R&D Intern, Oximetry & Wearables, Boulder, CO Jun - Aug 2024

- Experienced Systems Engineering, created a new requirements doc for an outdated analytics software to be followed by a contractor by collecting 40+ stakeholder voices and drafting 10+ visual designs
- Designed and executed laboratory ambient light testing for a next-generation pulse oximetry sensor, analyzed data to create new specs for use in clinical environment
- Refined an official ambient light test procedure, protocol, and memo to be used for product validation and verification, 50+ pages

LEADERSHIP EXPERIENCE

Machine Shop Assistant, CAD & Fabrication, CU Boulder Feb 2025 - Present

- Instruct 50+ student groups to operate the mill and lathe safely and efficiently during 1-on-1 sessions
- Emphasis on DFM while machining 6 distinct components of a wobbler engine able to run for 2 minutes at 10 psi

Teaching Assistant, Mechanical Engineering as a Profession, CU Boulder Aug 2024 - Present

- Teach and model career skills such as elevator pitching, interviewing, and job applications for 60+ students
- Critiqued 30+ resumes, portfolios, and cover letters, supporting students to achieve career goals

STUDENT AFFILIATIONS

Buffy Buffs, Founder & President Mar 2025 - Present
Taylor Swift Club, Vice President & Treasurer Dec 2023 - May 2025
Society of Women Engineers, Member, WE24 Conference Aug 2023 - Present