

Amanda Stevens

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EDUCATION

University of Colorado Boulder, Boulder, CO

Expected Graduation May 2027

B.S. Mechanical Engineering, Minor in Physics, GPA: 3.93

TECHNICAL SKILLS

CAD & Design: SOLIDWORKS (CSWA, 300+ hrs), Onshape (50+ hrs), Engineering Drawings (TA for Component Design, Manufacturing Reviews), 3D Printing (Prusa, Markforged, 5 yrs), 3D Scanning (Artec, 2 yrs), Laser Cutting (Epilog, 5 yrs)

Programming & Analysis: MATLAB (300+ hrs), LabVIEW (50+ hrs), Arduino (50+ hrs), C++ (50+ hrs), Python (30+ hrs)

Manufacturing: Lathe & Mill (40+ hrs)

ENGINEERING EXPERIENCE

Medtronic Research and Development Intern – Boulder, Louisville, CO

June–August 2024 & 2025

- Supported research and development of neonatal regional oximetry sensors for the INVOS™ monitoring platform.
- Designed and prototyped infant pulse oximetry sensor configurations and testing fixtures, evaluating flexibility and conformability using an Instron Universal Testing Machine while maintaining optical performance.
- Developed and executed test protocols to characterize prototype flexibility and optical performance and used statistical analysis to guide subsequent design iterations using MATLAB.
- Created a clinical study protocol to evaluate alternate sensor locations and collaborated with Medtronic's Presbyterian/St. Luke's Medical Center laboratory personnel to execute the study.
- Analyzed clinical study data and documented results and conclusions in a technical report to support future sensor development or additional calibration scheme.

Integrated Teaching & Learning Laboratory Engineering Support Staff, UC-Boulder – Boulder, CO

January 2023–Present

- Teach hands-on engineering workshops covering 3D printing, 3D scanning, CAD, basic electronics, and laser cutting.
- Provide technical support to students completing engineering project courses and personal projects.
- Maintain a fleet of 20 Prusa self-service 3D printers and 5 Epilog Laser Engravers to support prototyping and fabrication.
- Assist students in selecting appropriate manufacturing methods and resolving design and fabrication issues.

University of Colorado Boulder Course Assistant – Boulder, CO

August 2025–Present

- Support undergraduate courses in Thermodynamics, Statics & Solids, Component Design, and Data Analysis through office hours and technical assistance.
- Assist 600+ students with engineering analysis, mechanical design, and problem-solving while communicating complex technical concepts.
- Participate in 18 Critical Design Reviews and provide feedback on mechanical designs and engineering drawings.
- Develop technical communication and mentorship skills through regular interaction with engineering students and faculty.

Bionic Engineering Laboratory Engineering Intern, University of Utah – Salt Lake City, UT

June–August 2023

- Redesigned a powered robotic knee prosthesis to improve structural strength, transmission performance, ease of assembly, and overall design simplicity.
- Designed and iterated mechanical components in SOLIDWORKS and fabricated and assembled the prosthesis.
- Developed Arduino/C++ control software incorporating PID control for powered knee operation using Github for repository storage.
- Created comprehensive open-source documentation, including step-by-step assembly instructions, build videos, testing and tuning procedures, and code walkthroughs.
- Presented the prosthesis design and open-source platform at the Utah Biomedical Engineering Conference.
- Continue to maintain the OpenLeg educational website and provide technical support to students building and modifying the prosthesis.

ADDITIONAL EXPERIENCE

Mechanical Engineering Student Advisory Board Treasurer (March 2026–Present), Eldora Mountain Volunteer Ski Patrol (April 2026–Present), Volunteer Middle School Tutor (2022–2025), Semester at Sea Alumni (Spring 2025)