

Egan Bauersfeld

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EDUCATION

University of Colorado Boulder

Expected Graduation: May 2028

B.S. Integrated Design Engineering, Mechanical Engineering Emphasis | GPA: 3.2

2024 Boettcher Scholar | Gold Medal Congressional Award

PROFESSIONAL EXPERIENCE

University of Limerick — School of Product Design and Architecture

Limerick, Ireland

Sustainable Materials Researcher

May – July 2026

- Created and tested sustainable material formulations from waste wool and bio-resin, designing testing protocols to international standards
- Authored a technical report detailing material formulation, testing methodology, and performance results

Colorado State University — Wilson Laboratory

Fort Collins, CO

Optics Researcher

May – August 2025

- Designed and fabricated custom mechanical components for optical systems, retrofitting outdated hardware when commercial solutions were unavailable
- Performed high-precision optical alignments and developed FF-OCT acquisition procedures; co-authored a conference paper

ENGINEERING PROJECT EXPERIENCE

Adaptive Racket Gauntlet

Boulder, CO

Project Manager / Lead Designer

January – April 2026

- Led a multi-disciplinary team of six engineers, managing conflict, delegating responsibilities, and keeping the project on schedule
- Worked directly with the client to define requirements and develop a tailored product
- Prepared technical reports covering material testing, structural analysis, and predicted failure modes

Statics Truss Project

Boulder, CO

CAD Engineer

August – December 2025

- Produced CAD models and drawings and performed structural analysis in MATLAB/Excel to drive truss geometry and member sizing decisions
- Led manufacturing and assembly of a truss that sustained 1.5× the required load capacity

Thermodynamics Steady-Flow Device

Boulder, CO

Electronics Engineer

August – December 2025

- Modeled fan blades and airflow components in SolidWorks and assembled the compressed-air test rig
- Implemented an Arduino-based data acquisition setup and conducted EES-based analysis to compare measured flow behavior with thermodynamic predictions

Web-Connected Smart Shelf Insert

Boulder, CO

Project Manager / Mechanical Design Engineer

August – December 2024

- Led mechanical design (CAD modeling, prototyping) for a web-connected smart shelf improving accessibility in community pantries
- Awarded Best in Section at the CU Engineering Fall Design Expo for product development, analysis, and presentation

SKILLS

Digital Tools: SolidWorks (CSWA), Fusion, Onshape, AutoCAD

Fabrication: Lathe, Milling, Soldering, 3D Printing, Laser Cutting, Welding

Programming & Analysis: C++, MATLAB, Python, Arduino, EES

STUDENT AFFILIATIONS

Engineering Honors Program, Boulder, CO

August 2024 – Present

Undergraduate Enrichment Program Social Committee, Boulder, CO

September 2024 – Present

Theta Tau Professional Engineering Fraternity, Boulder, CO

January 2025 – Present

Integrated Design Engineering Student Advisory Board, Boulder, CO

April 2025 – Present

National Society of Interdisciplinary Engineers — National Board Treasurer

July 2026 – Present