

Cole Rutkowski

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PERSONAL PROFILE

- Third year mechanical engineering student
- Interest in machining and welding, renewable energy, and safety systems
- Semi-professional runner, hobby climber and dancer

EDUCATION

BS in Mechanical Engineering, University of Colorado Boulder

Graduation Date: May 2026

- Spanish Minor GPA: 3.28
- Relevant Courses: Beginner Welding, Machine Shop Safety and Technology, Operation of Universal Test Machines

SKILLS

Fabrication: Lathes and Mills, MIG and TIG welding,, 3D printing, Woodworking tools

Software: SolidWorks, C++, Microsoft Office

ENGINEERING EXPERIENCE

Personal Project

August 2023

Crack Simulation Training Machine

- Independently designed and constructed training machine to simulate climbing in Yosemite and Indian Creek
- Researched crack systems, consulted local climbers to accurately mimic rock features
- Outsourced materials and tools from climbing and construction industry connections
- Custom-machined bolts to limit constriction and compression

Personal Project

September 2023 - Present

Making and Testing Climbing Nuts, Hexes, and Cams

- Machined custom components with waterjet, lathe, and mill from Aluminum 6061-T6
- Researched mountaineer, homemade, and professionally-produced gear made between 1970 and the present
- Studied and modeled old gear, hand-sketched and CAD modeled custom variations
- Tested aircraft-cable extensions in tension machines
- Fall tested new gear on real rock with increasingly large falls (30ft max)

LEADERSHIP EXPERIENCE

UniTango, Boulder, CO

April 2023

- Organized 4-day tango workshop to introduce dance and build community for locals and students
- Partnered with Colorado School of Mines and University of Kansas to staff volunteers negotiate student discounts

Mountain Guiding and Safety

September 2022 - Present

- Teaching safety and mountain skills to novice climbers through the Alpine Club
- Guiding new climbers on routes in multi pitch and alpine terrain
- Emphasis on safe anchors, rope systems, planning and preparation, and logistics

STUDENT AFFILIATIONS

Tango Club, Chess Club

August 2022 - Present

Alpine Club

August 2021 - Present

INTERESTS

Distance running (professional marathon team, 80+ miles per week, 14:30 5k and 4:15 mile)

Trad Climbing and Mountaineering

Dance (Tango, Country Swing)

Chess