Kristian Felten

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EDUCATION

University of Idaho | Moscow, Idaho | **B.S. in Mechanical Engineering** | **Institutional GPA:** 3.30
Expected Graduation: May 2027

North Idaho College | Coeur d'Alene, Idaho | **A.A.S. in Automotive Technology** | **Graduated:** May 2025

TECHNICAL SKILLS

CAD/Modeling: SolidWorks (CSWA Completed May 2025), Fusion 360

Software: ANSYS (FEA/Mechanical), Mastercam, Excel/VBA

Programming: Python, MATLAB, and Arduino IDE

Mechanical: TIG and MIG welding, manual and CNC machining, sheet metal fabrication, 3D printing

Other: Lean manufacturing, electrical/mechanical diagnostics, electrical design, powder coating, automotive painting, electroplating

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PROJECTS

IFIRE Lab Pine Needle Separator – Capstone Project (Mechanical Design Lead)
University of Idaho | September 2026 – Present

- Developing an automatic multistage separation machine to isolate pure pine needles with <1% debris.
- Designing conveyor belt sorting of large debris to feed into secondary sorting trommel.

1973 Jeep CJ5 – Personal Restoration
Personal Workshop | 2020 – Present

- Performing a frame-off restoration: sandblasted, painted, and powder coated all components. Finished body work and topcoat.
- Designed and built a custom wiring harness, performed engine swap and custom fabrication.

WORK EXPERIENCE

Mechanical Engineer - Intern
Z·AERO, Sandpoint, Idaho | June 2026 – August 2026

- Designed a commercial hospitality product from concept to final design and delivered the manufacturing package for injection molding.
- Prototyped and validated proof-of-concept mechanisms using CAD and 3D printing.
- Revised structural test plans and compliance analysis reports to meet FAA airworthiness regulations.
- Evaluated static and fatigue life through hand calculations in Excel; added VBA routines to the FEM validation calculator that display reference images, making elements easier to identify.
- Designed dynamic test fixture sensor mounts; assisted with hardware diagnosis, troubleshooting, and repairs during structural test runs.

Machine Shop Mentor
University of Idaho, Moscow, Idaho | January 2026 – May 2026

- Guided students through semester projects, including tool selection, machine setup, workpiece holding, and safe practices.

Field Professional - Intern
STRATA, Hayden, Idaho | May 2024 – August 2024; May 2025 – August 2025

- Performed laboratory volumetric testing of hot mix asphalt in accordance with QMS, AASHTO, and ASTM standards.
- Coordinated with engineers and the Idaho Transportation Department to collect field material samples.
- Calibrated and maintained lab equipment following manufacturer procedures based on scheduled and need-based maintenance.

Residential Construction
Felten Enterprises, Sagle, Idaho | May 2018 – June 2023

- Built custom homes, remodels, and full structural renovations from groundwork through finish work.
- Worked directly with homeowners to review plans, changes, and progress.