

HANS REKSTAD

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Mechanical Engineering student at Colorado State University with hands-on experience in vehicle systems, manufacturing processes, and CAD-to-fabrication projects. Experienced in taking projects from concept through design, fabrication, testing, and troubleshooting. Fluent in Spanish. Seeking Summer 2027 Engineering Internship Opportunities.



project portfolio

EDUCATION

Colorado State University — B.S. Mechanical Engineering, Expected May 2028

Relevant Coursework: Engineering Design, CAD, Statics, Dynamics, Manufacturing, Materials

TECHNICAL SKILLS

CAD / Design: SolidWorks, Mechanical Design, Prototyping

Programming: MATLAB

Manufacturing: Manual milling & turning, CNC milling & turning, injection molding, drop forging, 3D printing

Fabrication / Hands-On: Welding, vehicle diagnostics & repair, mechanical assembly, hand & power tools

Languages: Spanish — Fluent

ENGINEERING PROJECTS

Full project write-ups, photos, and technical detail: hansrekstad.com

CSU Manufacturing & Design Projects | *Functional chronometer, injection-molded screwdriver, drop-forged screwdriver, CNC-machined coaster, 3D-printed phone holder*

- Designed and produced functional parts across five projects, each using a different manufacturing process end-to-end: manual milling and turning, CNC milling and turning, injection molding, drop forging, and additive manufacturing.
- Modeled components in SolidWorks and adjusted designs to fit the tolerances and constraints of each specific process.

1991 Mazda Miata — Performance Build | *Manual Conversion, Turbo Integration & Brake Overhaul*

- Engineered an automatic-to-manual transmission swap and integrated a Garrett turbocharger onto the naturally aspirated engine while retaining factory A/C and power steering.
- Resolved driveline, engine-bay packaging, airflow, and clearance conflicts created by the conversion; tuned air/fuel mixture and ignition timing for turbocharged operation.
- Designed and fabricated custom aluminum turbo/intercooler ducting, oil supply/return lines, and an air-filter enclosure; used CAD and 3D printing for mounting components.
- Completed a full brake system overhaul and integrated racing seats, harnesses, and a roll bar — taking the car from concept through fabrication, tuning, and final sale.

2006 Ram 1500 TRX 4WD — Reliability Restoration | *Suspension, steering, brake, and powertrain systems*

- Evaluated interconnected suspension, steering, braking, and powertrain systems on a truck affected by years of deferred maintenance and developed a coordinated plan to restore reliability, drivability, and stance.
- Overhauled suspension and steering components — shocks, struts, ball joints, tie-rod ends, wheel bearings — and completely rebuilt the primary and parking brake systems, replacing severely corroded backing plates.
- Sourced and integrated a significantly lower-mileage replacement engine, restoring the truck to reliable, mechanically sound operation with improved drivability and braking performance.

2007 Harley-Davidson Sportster 883 XL — Ergonomic Redesign | *Controls, Wiring & Linkage*

- Reimagined the rider interface, redesigning handlebar and foot-control placement to achieve a wider, forward-control riding position.
- Adapted control wiring, cables, and linkages to accommodate the new control locations and increased handlebar width; replaced a cracked oil tank.

EXPERIENCE

Seasonal Outdoor Ice Attendant | *City of Eden Prairie* | Nov 2023 - Present

- Supervise daily rink operations and ice conditions, maintaining equipment and a safe environment for guests.

Front Line Cook | *Chipotle Mexican Grill* | May 2023 - Oct 2023

- Prepared orders and completed nightly closing responsibilities in a fast-paced team environment.

Snowboard Instructor | *Three Rivers Park District* | Nov 2020 - Mar 2022

- Instructed beginner and intermediate snowboarders in private and group lessons, adapting coaching to individual skill levels while building confidence through hands-on instruction and clear communication.

LEADERSHIP & INVOLVEMENT

- Varsity Lacrosse, Goalie & Team Leader | Eden Prairie, MN (10+ yrs): Mentored younger athletes, directed defensive communication, and demonstrated leadership under pressure.
- Colorado State Snowriders Club | Aug 2024- present, active participant in CSU ski and snowboard events.
- Young Men's Service League | Eden Prairie, MN, 2021-2024; volunteer, Meals on Wheels | Eden Prairie, MN 2021-2024.