

Caleb Oien

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Education

South Dakota School of Mines and Technology — Rapid City, SD

B.S. Mechanical Engineering

May 2026

- Senior Design: NASA Lunabotics Rover — Mechanical Subsystems
- Key Electives: Rockets & Propulsion, Finite Element Analysis, Rockets & Mission Analysis, Batteries & Energy Storage

Projects

Lunabotics Rover Senior Design — Excavation Subsystem Lead

Designed the excavation subsystem using SolidWorks, performed finite element analysis to validate structural integrity, and collaborated on manufacturing and system integration.

Minimalist Wallet (CNC Aluminum)

Designed a minimalist wallet in AutoCAD and generated manufacturing-ready files for CNC machining in the campus manufacturing lab. Selected aluminum for lightweight durability; focused on design-for-manufacturing (DFM) constraints and tolerances.

3D Printed Lid Mechanism (In Progress)

Designed a swiveling lid mechanism in SolidWorks; iterated tolerances using PLA 3D printing to improve fit and reliability.

Skills

- **Engineering:** Finite Element Analysis, Stress Analysis, System Dynamics, Failure Analysis
- **Software:** MATLAB, SolidWorks, Microsoft Office, 3D Printing
- **Applications:** Rockets & Propulsion, Product Design, Heat Transfer, Energy Systems

Experience

IHOP — Prep Cook / Line Cook / Crew Chief / Dishwasher

Rapid City, SD

June 2023 – Present

- Advanced from dishwasher to crew chief, gaining leadership and operational adaptability
- Supervised staff, maintained food safety standards, and supported fast-paced service

Bed Bath & Beyond — Sales Associate

Rapid City, SD

February 2017 – May 2019

- Delivered customer service and maintained efficient sales floor operations

South Dakota Department of Transportation — Summer Intern

Rapid City, SD

May 2016 – August 2016

- Organized project files and reports; supported problem-solving for infrastructure tasks

Certifications

- National Career Readiness Certificate (ACT)
- Energy Industry Fundamentals (EIF)
- Engineer Intern (EI), South Dakota – Certificate No. E-15120