

# Michael J. Gray

Boulder, CO 80301 | 818-331-2247 | michaelonskis@gmail.com | [michaelonskis1.github.io/portfolio-site](https://michaelonskis1.github.io/portfolio-site)

## EDUCATION

### UNIVERSITY OF COLORADO BOULDER - B.S. Mechanical Engineering

Minor: Engineering Management | GPA: 3.53 | May 2024

## TECHNICAL SKILLS

**CAD & Simulation:** SolidWorks Mechanical Design Associate Level, AutoCAD, Parametric Modeling

**Testing & Validation:** Vibration, Force, Life-Cycle, Assembly Testing; Root Cause Analysis; Design Verification

**Prototyping & Manufacturing:** 3D Printing, Milling, Laser Cutting; Design for Manufacturability

**Programming & Analysis:** MATLAB, C++, Arduino

**Design Review:** Mechanical drawing review, vendor communication, project status reports

**Tools:** Microsoft Office, GD&T, Engineering Drawings, Project Management, Design Controls Documentation

**Soft Skills:** Technical writing, stakeholder communication, team leadership

## WORK EXPERIENCE

### MECHANICAL ENGINEER INTERN - Altius Space Machines (Powered by Voyager Space)

May 2023 - Aug 2023 | Broomfield, CO

- Reviewed designs and mechanical drawings for flight hardware and structures
- Designed, assembled, and documented spacecraft connection port demo housing using SolidWorks
- Conducted force, vibration, and life-cycle testing for flight-qualified components
- Prototyped custom parts using 3D printing and manual machining
- Collaborated with senior engineers to iteratively refine designs based on testing feedback
- Contributed to early-stage development, test plan execution, and supplier coordination
- Evaluated design trade-offs during engineering reviews and proposed modifications to improve manufacturability, performance, and reliability of prototype hardware

### COLLEGIATE FIELD STAFF - Navigators Nonprofit

May 2024 - Present | Boulder, CO

- Mentored 7-10 students weekly and organized outreach events for 50+ attendees
- Led weekly small groups and monthly gatherings with structured team planning
- Raised over \$60,000 to support campus ministry operations; self-managed schedules and goals
- Reported strategic progress to senior leadership with regular check-ins

### MAINTENANCE STAFF - YMCA of the Rockies

Summers 2021 & 2022 | Granby, CO

- Maintained infrastructure across 8,000-acre property as part of 15-person operations team
- Developed and executed daily work plans independently
- Performed hands-on troubleshooting and system repairs; improved cross-team communication

## PROJECT EXPERIENCE

### Project Manager - U.S. Army Sensing System (Senior Design)

Sep 2023 - May 2024 | University of Colorado Boulder

- Led 10-person team in developing a 3-stage sensor launch system for military tracking
- Designed housing, mounts, and tube components in SolidWorks; led testing and design reviews
- Managed full documentation and prototype validation; oversaw client demos
- Delivered final prototype meeting all 8 design requirements; received positive Army feedback
- Integrated PCBs, capacitors, and high-voltage components to actuate a custom solenoid, applying electrical and power principles to ensure system compatibility and reliable projectile launch

### Team Lead - Drill-Powered Scooter Design

Sep 2022 - Dec 2022 | University of Colorado Boulder

- Led 6-member team designing endurance vehicle powered by a cordless drill
- Owned full development lifecycle: concept, CAD modeling, analysis, testing, and optimization
- Prioritized manufacturability and structural simplicity while meeting torque and speed targets

## CERTIFICATIONS & HONORS

- SolidWorks Mechanical Design Associate (CSWA) · April 2021
- Fundamentals of Engineering (FE) Exam - Passed · March 2024
- Eagle Scout · November 2019