

# Michael J. Gray

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## EDUCATION

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

Minor: Engineering Management | GPA: 3.53 | May 2024

## TECHNICAL SKILLS

CAD & Simulation: SolidWorks (CSWA), 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

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

## WORK EXPERIENCE

### MECHANICAL ENGINEER INTERN - Altius Space Machines

May 2023 - Aug 2023 | Broomfield, CO

- Designed, assembled, and documented spacecraft connection port hardware 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
- Company acquired by Voyager Space during internship

### 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 | Estes Park, 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

### Team Lead - Drill-Powered Scooter Design

Sep 2022 - Dec 2022 | University of Colorado Boulder

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

## CERTIFICATIONS & HONORS

**Fundamentals of Engineering (FE) Exam - Passed - March 2024**

**SolidWorks Mechanical Design Associate Level - April 2021**

**Eagle Scout - November 2019**

- Earned Bronze and Gold Palms; led 200+ member troop as Senior Patrol Leader