Andreas Wilwerding

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Education

University of Colorado Boulder

Graduate Coursework, Electrical & Computer Engineering (Online) In Progress

B.S. Aerospace Engineering, Minor in Business May 2026

Relevant Coursework:

Structures, Materials Science, Thermodynamics & Heat Transfer, Dynamics, Applied Electronics

Engineering Experience

Robotic Rover Powertrain Development & Test (Senior Capstone) Aug 2025 – May 2026

- Developed MATLAB drivetrain models to evaluate loads, guide component selection, and compare design alternatives; presented analysis and trade studies at design reviews.
- Assembled a rover powertrain and contributed to CAD development, hardware integration, and troubleshooting for a three-rover autonomous system.
- Collaborated on powertrain test planning and execution across operating configurations, evaluating day-in-the-life performance against system requirements.
- Designed the drivetrain PCB within a multidisciplinary team of approximately 25 engineers; coordinated with other subteams on carrier-board interfaces and bill-of-materials updates.

Student Spacecraft Assembly, Integration & Test Engineer | MAXWELL CubeSat Oct 2024 – Jul 2025

- Assembled and integrated spacecraft subsystems, including harness assembly, connector verification, and continuity testing; maintained schematics, wiring diagrams, connector documentation, and configuration-controlled integration records.
- Executed hardware tests against requirements; collaborated with teammates to document discrepancies and troubleshoot integration issues.

Work Experience

Spectrum and Space Policy Intern, Silicon Flatirons Jun 2025 – Sept 2025

- Co-authored the 2025 Silicon Flatirons Conference Outcomes Report: Challenges in Sustaining Space as a Resource, a published analysis of policy and technical insights. (Published at SiliconFlatirons.org)
- Assisted in facilitating the 2025 Spectrum and Space Policy Conference, preparing briefing materials and supporting operations on spectrum allocation and orbital debris policy sessions.

Chess Instructor, Chessmates / Boulder Valley School District Jan 2026 – May 2026

- Led K–5 chess classes four days per week, adapting explanations to different ages and abilities; invited to return as an instructor.

Chief Technology Officer and Co-Founder, Cookademy May 2025 – Aug 2025

- Collaborated with co-founders to translate product goals into technical priorities and lead early product development through Silicon Flatirons' Startup Booster Program.

Server / Barback / Busser, Lakehouse Kitchen and Tavern Apr 2021 – Aug 2023

- Supported service for 150–200 guests nightly, coordinating with kitchen and bar staff and shifting between responsibilities to meet changing team needs.

Skills

Mechanical Design: SolidWorks, AutoCAD, Engineering Drawings, Drivetrain Sizing, Prototyping & Shop Fabrication, GD&T (familiarity)

Analysis & Test: MATLAB/Simulink, Python, Mechanical Analysis, Trade Studies, Data Analysis, Test Planning & Execution, Requirements Verification

Hardware: Integration, PCB Design, Altium, Wiring Schematics, Troubleshooting, Soldering, Crimping

Documentation & Tools: BOMs, Configuration Management, Technical Documentation, Multimeters, Oscilloscopes, Power Supplies

Leadership

Co-President, Silicon Flatirons Undergraduate Student Group Aug 2025 – May 2026

- Founded an undergraduate organization and grew membership sixfold; partnered with Silicon Flatirons to connect students with space industry leaders through talks and networking events.