

Ryan Cross

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Honors graduate pursuing M.S. in Aerospace Engineering with 3+ years of professional and leadership experience. Committed to continuous learning to make a positive impact on the planet and drive a more sustainable future.

Professional Skills

4+ years in software engineering | **MATLAB, Python, C++, GitHub, Linux, and OpenC3 COSMOS**

2+ years in computational analysis | **SimScale, OpenFOAM, Simcenter STAR-CCM+, ANSYS Fluent and ParaView**

2+ years in design & manufacturing | **OnShape, Siemens NX, SOLIDWORKS, OpenVSP, and 3D printing**

1+ years in systems engineering | **MBSE, Cameo Enterprise Architecture, and Velocity Template Language**

Work Experience

SIERRA SPACE | *Systems Engineering Intern*

May 2026 - Present

\$8 Billion aerospace leader building next-generation spacecraft and space infrastructure

- Monitored high-risk ground station thermal zones by installing sensors and following ESD safety procedures
- Programmed OpenC3 COSMOS thermal response protocols to protect \$900K in flight-representative hardware
- Demonstrated thermal safeguard system via LabVIEW simulated testing and experimental validation
- Verified and closed 5 SDA launch readiness requirements using Cameo Enterprise Architecture

KASHMIR WORLD FOUNDATION | *Aerodynamics Intern*

Dec 2025 - Sep 2026

Nonprofit team advancing wildlife conservation through blended-wing body UAS technology

- Conducted CFD analysis from 0-20 AoA, using results to drive design changes and identify elevon trim angles
- Resolved CAD model 2in OnShape and refined mesh to achieve y^+ optimization for solution convergence
- Documented setup, strategy, and modeling in a published technical paper to justify results

KAIROS POWER | *Test Engineering Intern*

May - Aug 2025

Nuclear energy company developing advanced molten-salt reactor technology

- Designed and built a 6-ft reactor coolant test section to fabricate and collect experimental void fraction data
 - Computed theoretical void fraction predictions using established two-phase flow models and analyses
 - Created a multidimensional optimization function in MATLAB to plot prediction error in various 3D spaces
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Projects

CU DESIGN BUILD FLY | *Lead Propulsion Engineer*

Apr 2024 - May 2026

Student team designing, building, and flying mission-optimized aircraft for AIAA competition

- Designed critical aircraft components using CAD and produced 4 prototype stages with CAM techniques
- Collaborated on mission proposal by applying technical writing methods, placing top 25% after AIAA official review

SENIOR CAPSTONE | *Design and Test*

Aug 2025 - May 2026

Goal: Improve Boeing 737 MAX-8 efficiency by 50% across a 40-member team

- Assembled ground station for prototype demonstrator, executing design process in a project PDR and CDR
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Education

University of Colorado Boulder

Aug 2025 - May 2027

M.S. Aerospace Engineering - Fluids, Structures, Materials

GPA: 4.0/4.0

University of Colorado Boulder

Aug 2022 - May 2026

B.S. Aerospace Engineering

GPA: 3.7/4.0