

Carter Mak

Undergraduate Student, Aerospace Engineering

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EDUCATION

University of Colorado, Boulder — 2018-present

- 4.0 GPA
- Engineering Honors Program
- B.S. Aerospace Engineering
- Minors Economics, Computer Science

Boulder High School — 2014-2018

- 4.5 GPA, Summa Cum Laude
- Lettered in academics and theater
- National Honor Society
- Advanced Placement diploma

WORK/VOLUNTEER EXPERIENCE

Avionics Engineer — *CU Sounding Rocket Laboratory* — Fall 2019-present

- Dedicated team member developing an in-house custom flight computer
- Applying object-oriented C++ to create a flexible and robust flight software package
- Rapid prototyping of hardware and software

Experimental Research Student — *Northwest Research Associates* — Spring 2018-present

- Designed and implemented a discrete Fourier-based method to calculate temporal image shift for quantitative turbulence analysis, among other MATLAB-based routines
- Executed field experiments in the Southwest U.S. and Hawaii, developing workflows to optically measure atmospheric turbulence

Head Lighting Designer/Event Technician — *Boulder High School* — 2014-2018

- Professionally consulted, organized, and delivered lighting and ancillary technical services for dozens of live events in an 800-seat theater including political caucuses, dance productions, and film festivals
- Routinely managed equipment purchases each totaling upwards of \$10,000
- Assessed technical issues and served as a liaison during a full lighting system overhaul

Junior Ranger — *City of Boulder* — 2015-2016

Proactively coordinated with superiors and team members to construct and maintain Open Space trails

LEADERSHIP

Lighting Team Leader — *Boulder High Theater* — 2017-2018

- Led a team of eight in artistic design and hands-on technical work supporting theatrical features and event production
- Fostered a productive and collegial work environment → voted best department leader out of seven by peer review

“Panther Pride” Leader — *Boulder High School* — 2016-2017

- Helped a class of 30 incoming freshmen transition to High School, alongside a team of peers
- Provided enthusiastic support at both the group and one-on-one levels with an eye on trust and building a strong, proud community

AWARDS AND ACCOLADES

- International Mathematical Contest in Modeling—*Honorable Mention, 2019; 14,000 worldwide teams*
- ULA Future Heavy Payload Competition—*First Place, 2018*
- College Board AP—*National Scholar, 2018*
- National Merit Scholarship—*Finalist, 2017*
- Boulder High School—*Sophomore of the Year, 2016*

SKILLS

<i>Digital</i>	MATLAB, C++, \LaTeX , Wolfram Mathematica, Adobe Lightroom, Vectorworks Spotlight, Microsoft Office Suite, NorPix StreamPix 7/Batch Processor, Markdown, Basic Bash/Linux Shell, Arduino, Computational Image Analysis
<i>Hands-on</i>	Team Leadership, Public Speaking, Communication, Artistic and scientific photography/videography
<i>Hobbies</i>	Hiking, Skiing, Climbing, Photography