

# COLE MACPHERSON

Aerospace Engineer

📍 University of Colorado Boulder  
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## WHO AM I?

I am an undergraduate at the University of Colorado Boulder pursuing a degree in aerospace engineering. My strong interests are spacecraft design, as well as, design verification and validation. Particularly, I am interested in aerodynamics, propulsion, and thermodynamics.

## GPA

3.42

## B.S. AEROSPACE ENGINEERING

May 2022



## COURSE WORK

- Aerodynamics
- Aircraft Electronics and Communications
- Data Structures
- Aircraft Dynamics
- Orbital Mechanics/Attitude Dynamics and Control
- Material Science
- Structures
- Thermodynamics and Heat Transfer
- Vehicle Design and Performance
- Experimental and Computational Methods

## PROJECTS

Spring 2020	<b>Glider Design and Testing</b> Designed a MATLAB script that used aerodynamic equations to analyze a glider design that was then fabricated and tested.	University of Colorado Boulder
Fall 2019 and Spring 2020	<b>Bottle Rocket Modeling and Launch</b> Designed a MATLAB script that utilized thermodynamic equations to analyze many parameters for a bottle rocket design. This design was later fabricated and launched.	University of Colorado Boulder
Spring 2020	<b>Data Structure Efficiency Analysis</b> Constructed C++ code to help the USPS determine which data structure was the most efficient for sorting mail tracking IDs. Five data structures were analyzed for their tracking efficiencies.	University of Colorado Boulder
Fall 2020	<b>Cube-Sat Radiator Design</b> Given a set of design requirements and a cube-sat, a radiator was to be constructed that would keep the satellite within a specific temperature range while in geosynchronous orbit.	University of Colorado Boulder
Spring and Fall 2020	<b>Truss Analysis</b> Given a specific truss and an applied force, the resultant forces and moments associated with the system were found using ANSYS and a created MATLAB script.	University of Colorado Boulder

## SKILLS

English - native  
Spanish - proficient

## OTHER INTERNSHIPS

Computer Science Intern in Barcelona (Cancelled due to COVID-19 pandemic)

## PORTFOLIO

<https://macphersoncole.github.io/Cole-MacPherson/>