Lucas Orion **Calvert**

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Honors Aerospace Engineering student interested in fluids, modeling, testing, and manufacturing - looking for full time work

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Education

M.S. in Aerospace Engineering Sciences [Expected Completion 2020]
Boulder, Colorado

UNIVERSITY OF COLORADO - BOULDER
2018 - PRESENT
- Focus Area: Fluids and Propulsion
- GPA: 3.70

B.S. in Aerospace Engineering Sciences
Boulder, Colorado

UNIVERSITY OF COLORADO - BOULDER
2015 - 2019
- Engineering Honors Program
- GPA: 3.69

Experience

United Rotorcraft (Air Methods Corporation)
Centenial, CO

ENGINEERING INTERN
Summer 2019
- Designed and created plans and fixtures to test components to be installed in the US Amy's AMPV and various medical evacuation helicopters
- Used Solidworks to create models and engineering drawings that updated and improved current production designs for many of United Rotorcraft's current projects, in compliance with company and FAA regulations
- Mapped, modeled and documented components on UH-60 (BlackHawk) helicopters to aid in the FireHawk conversion process (retrofitting with fire fighting equipment)

Aerospace Corporation: Undergraduate Capstone Design Project
Boulder, CO

MECHANICAL DESIGN LEAD
2018-2019
- Designed, modeled (in Solidworks), and built a levelable frame to hold and protect a star tracking camera and mount system to allow accurate pointing at orbital objects of interest
- Designed, laser cut and assembled acrylic boxes to enclose electronic components and protect them from damage
- Performed a motion study to ensure full range of motion without mechanical interference between components and tested against physical system to verify design

Computational Mechanics and Geometry Lab at the University of Colorado
Boulder, CO

UNDERGRADUATE RESEARCHER
Summer 2018
- Created the framework for a MacOS application that will aid in early-stage design exploration
- Completed an Isogeometric Analysis introduction course to become familiar with the unique mathematical tools used in the lab
- Implemented an Isogeometric Finite Element Heat Transfer solver in MATLAB from scratch

University of Colorado Idea Forge
Boulder, CO

ELECTRONICS AND FABRICATION TECHNICIAN
2015-PRESENT
- Lead workshops teaching students the fundamental electronics and fabrication techniques needed to be successful
- Helped students troubleshoot hands-on projects - from simple embedded system design to prototyping CNC machines
- Designed and built tools to improve functionality and work flow of the lab

Skills

DESIGN
- 2D & 3D CAD (Solidworks, Fusion 360, AutoCAD), Printed Circuit Board Design and Layout

PROGRAMMING
- MATLAB, Python, C++, Arduino, LaTeX, Swift

MANUFACTURING
- 3D Printing and rapid prototyping, CNC and manual machining, woodworking

RELEVANT COURSEWORK
- Fluid Mechanics, Computational Fluid Dynamics, Finite Element Method, Turbulence, Electronics, Graduate and Undergraduate Design Projects

Other Activities:

Sigma Gamma Tau National Aerospace Engineering Honors Society [Officer] - Organize club events, participate in outreach events

CU Hiking Club [Officer and Trip Leader] - Organize trips, teach members outdoor skills and manage club gear

Student Pilot - Certified for solo flight of a Piper PA-38