

# Seth Berryhill

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## Education

### **Bachelor of Science - Mechanical Engineering**

**Aug 2019**

University of Idaho - Moscow, ID

## Relevant Engineering Experience

### **Quadcopter Control System Researcher - Senior Capstone Design Project** **May - July 2019**

- Owned software development in a project with 4 members, leading meetings, and submitting progress reports to stakeholders on a weekly basis.
- Designed and wrote a control system for stabilizing a quadcopter drone in C++ using PID control.
- Used Kalman filtering and sensor fusion to determine position used in control response.
- Understood and identified system characteristics using experience with system identification.

### **Project Lead - Vandal Atmospheric Science Team** **Aug 2018 - May 2019**

- Led a team of three to design and test mechatronic automatic guided return systems to withstand extreme high altitude environments.
- Completed literature review of guided return platforms, atmospheric conditions, and the available tools.
- Launched and successfully retrieved weather balloons from 100,000 feet, gathering meteorological and solar data and conducting high altitude experiments, such as parachute testing for NASA.
- Developed system for documenting designs, data collection, and experiments.

### **Project Engineering Intern - Hoffman Construction** **May - Aug 2018**

- Managed and updated a database of electronic construction drawings and blueprints to reflect changes made during the construction of an underground light rail station.
- Improved efficiency in document management by automating 8 hours a month of work.
- Led safety review and presented at daily standup meetings that I assisted in organizing, consisting of 10 project managers and foremen.

### **Compliant Guitar Capo - Compliant Mechanisms Course** **Aug - Dec 2018**

- Used principles of compliant design to develop a guitar capo for single-injection molding.
- Wrote tools to calculate design parameters in Python.
- Created Python tools to model our system and produce a force and stress analysis, and kinematic diagram.

## Technical Skills

Programming:	Python, C++, Matlab, R, LaTeX, Git, html/css
Mechanical Analysis:	Control Theory, Sensor Fusion, Kinematics, FMEA
Software:	ABAQUS, SolidWorks

## Awards and Honors

- Eagle Scout, awarded for biodiversity conservation project in local riparian zones
- 1st Place, Recreational Division - Veni Vidi Ascendi Rock Climbing Competition
- Discover Idaho Silver Scholarship
- Engineer in Training Certification (NCEES)