

Seth Berryhill

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Education

Bachelor of Science - Mechanical Engineering
University of Idaho - Moscow, ID

Aug 2019

Relevant Engineering Experience

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

- Owned development of 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.
- Wrote a Kalman filter using sensor fusion to determine position used in control response.
- Understood and identified system characteristics using experience with system identification.

Project Engineering Intern - Hoffman Construction **Summer 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 removing 8 hours a month of work. Changes include writing bash scripts to produce 1000+ directories instead of manually making and titling them.
- Led safety review and presented at daily "Stand Up" meetings that I assisted in organizing, consisting of 10 project managers and foremen.

Project Lead: Guided Parafoil - Vandal Atmospheric Science Team **Aug 2018 - Present**

- 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.

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.

Other Experience

- Seasonal Lead for five years at the City of Buckley Department of Parks and Recreation.
- Treasurer of the Climbing Team for two years at the University of Idaho.

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, Troop 577
- 1st Place, Recreational Division - Veni Vidi Ascendi Rock Climbing Competition