

# Quinn R. Burford

Duvall, WA | Bozeman, MT

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**In Possession of DoD Secret Clearance**

## EDUCATION

**Bachelor of Science, Mechanical Engineering | Minor, Mathematics**

Montana State University, Bozeman, MT | Graduating with Honors: May 2023 | **GPA: 3.92**

## TECHNICAL SKILLS

Certified Solidworks Professional (CSWP) | Joint Analysis / Mechanical Design Using Hand Calculations and FEA (Solidworks) | MATLAB | Drafting Engineering/Manufacturing Drawings | Mandarin Chinese

## WORK EXPERIENCE

**Mechanical Engineering Intern, United States Navy**

*(May 2022 – Present)*

Naval Undersea Warfare Center, Keyport, WA

- Utilized FEA and hand methods to design and deliver a Launch and Recovery Crane for an Unmanned Underwater Vehicle in 9 weeks within a budget of \$20,000
- Maintained frequent communication with customer to ensure future tactical development of product

**Stress Analysis Engineer**

*(Oct. 2021 – Present)*

MSU Space Science and Engineering Laboratory, Bozeman, MT

- Performed stress analysis under 6 load cases for high altitude balloon critical sensor mounts
- Wrote and delivered a stress report for design approval from NASA

**Quality Control Intern**

*(Jun. 2021 – Aug. 2021)*

CalPortland, Snoqualmie, WA

- Manually conducted upwards of 190 aggregate product tests to ensure product specifications were met
- Introduced relevant ASTM test procedures to solve sand consistency problem

**Math Learning Center Tutor**

*(Aug. 2020 – Dec. 2021)*

Montana State University, Bozeman, MT

- Taught mathematical ideas to students in college algebra through differential equations
- Comforted frustrated students enabling them to refocus and succeed in their courses

## PROJECTS

**Planetary Orbit and Gravity Simulation**

- Led a team of 3 engineers in implementing Fourth Order Runge-Kutta Methods to simulate gravitational orbits and motion
- Created tools to set up different scenarios including large galaxies with adjustable angular momentum

**Stress, Impact, and Fatigue Analysis of an Aluminum Baseball Bat**

- Collaborated with two engineers to approximate fatigue life of a baseball bat using average usage parameters

## HONORS AND AWARDS

- Eagle Scout – Boy Scouts of America
- Deans List – MSU Fall 2019 to Spring 2022
- WUE and Achievement Scholarship recipient
- National Award for Outdoor Achievement Recipient – Boy Scouts of America
- Cedarcrest High School Valedictorian 2019