


# Jordan Raymond


MECHANICAL ENGINEER SPECIALIZING IN CRYOGENICS AND THERMAL MODELING

## CONTACT

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## EDUCATION

### M.S. Mechanical Engineering

Washington State University  
Summa Cum Laude - 3.96 | 5/2021

### B.S. Mechanical Engineering

Washington State University  
Summa Cum Laude - 3.97 | 5/2019

## AWARDS

### Donna Jung Scholarship Award

Awarded Top Female Student in Cryogenics by the Cryogenic Society of America in 2019.  
Currently in consideration for top student overall for 2021.

### Founders Award

Awarded Top Master's Student at Washington State University, 2021.

## CERTIFICATIONS

### Certified Associate for Mechanical Design

SolidWorks | 2017

### Level 2 Training - Safe Practices for Hydrogen Systems

WHA International, Inc. | 2021

## PERSONAL STATEMENT

I have a passion for cryogenics and the unique opportunities for integration with future technologies ranging from energy to quantum computing. I have worked in the field of cryogenics for over four years. My focus to date has been increasing efficiencies of hydrogen and oxygen systems.

## EXPERIENCE

### GRADUATE RESEARCH ASSISTANT

WASHINGTON STATE UNIVERSITY (WSU), HYDROGEN PROPERTIES FOR ENERGY RESEARCH (HYPER) LAB | PULLMAN, WA | 08/2019 - 05/2021

Project manager responsible for the design, manufacture, build, and test of all aspects of a small-scale hydrogen liquefier (DOD Contract). Created a significantly more efficient system through implementation of a novel entropy optimized additively manufactured heat exchanger. Patent pending.

- Developed convergent analytical code to yield optimum heat exchanger design.
- Experience with cryogenic refrigerators, superconducting liquid level gauges, thermocouple rakes, heater blocks, and all associated plumbing and wiring.
- Established and executed project plan utilizing LEAN techniques.
- Supported staffing decisions - led a team of five undergraduate assistants.
- Performed supplier evaluations in support of contracting.

### UNDERGRADUATE RESEARCH ASSISTANT

WSU, HYPER LAB | PULLMAN, WA | 09/2017 - 08/2019

Developed a process for significantly increasing oxygen extraction efficiency from air utilizing vortex tubes with applied magnetic fields. Gains of 100% efficiency achieved. Patent pending.

- Responsible for theoretical verification of design.
- Designed experiments to meet all safety protocols.
- Manufactured, built, conducted tests, and analyzed results.
- Results presented at Cryogenic Engineering Conference 2019.

### R&D INTERN

PIPELINE2SPACE | SPOKANE, WA | 06/2018 - 09/2018

Independent contributor to the design, development, and implementation of a miniature instrumentation system used to monitor projectile dynamics in support of a terrestrial space launch concept demonstrator

- Responsible for design of a custom circuit board and code for the integration of miniature gyroscope and accelerometer on a small scale projectile.