


WILLIAM JARDEE

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OBJECTIVE

Undergraduate physics student pursuing a doctorate degree. Passionate about climate science, specifically complex dynamical systems that cannot be solved through standard analysis, and physics/computer science education. My heart lies in providing a safer, cleaner tomorrow and I would love to join you researching, analyzing, and teaching fundamentals and sustainability to the next generation of professionals.



EDUCATION

B.S. Professional Physics

Expected Graduation Date in May 2022

MONTANA STATE UNIVERSITY, BOZEMAN, MT

- Minors in Computer Science, Mathematics
- MSU Honors College Highest Distinction
- GPA: 3.91
- Major GPA: 3.87



RESEARCH EXPERIENCE

John Sample's Lab

August 2020 – Present

UNDERGRADUATE RESEARCHER, MSU

- Aided in developing an X-123 Soft X-ray Spectrometer for use on a solar spectrum observational CubeSat. The project aimed at calibrating the detector for accurate detection of a wider spectra in shorter time frames.
- Guided the collection of various spectra to understand specific details about our detector
- Began the process of developing provided code to be used to communicate with the CubeSat about the detector

Rufus Cone's Lab

Expected Graduation Date in May 2022

UNDERGRADUATE RESEARCHER, MSU

- Refurbished an eBay sourced Ellipsometer with no instructional manual
- Set up and studied material thickness using Ellipsometry
- Developed a primitive Mathematica code to automatically approximate Ellipsometry



TEACHING EXPERIENCE

Student Assistant

August 2020 – Present

PHYSICS DEPARTMENT

- Oversaw labs for introductory, algebra-based physics courses.
- Answered questions and explained concepts to ensure student understanding of critical physics concepts in kinematics.
- Remotely taught under numerous TA's in a personalized manner that complimented the provided teaching and the individual learning style of each student.

Smarty Cats Tutor

August 2019 – May 2020

STUDENT SUCCESS CENTER

- Implemented various teaching techniques to guide struggling students to deepened understanding of critical physics, math, computer science, and humanities.
- Independently organized around a dozen tutees to best fit their schedule and aid in homework, general comprehension and exam prep.
- Helped develop the transition of all MSU tutoring to an online format to meet COVID-19 demands.

Proctor / Grader

August 2019 – Present

PHYSICS DEPARTMENT

- Oversaw an examination room of 100 students, providing clarification on provided questions and enforcing accountability of students.
- Aided in grading multiple exams, striving for consistency between multiple graders and efficient completion of grading within one night.

Volunteer Tutor

October 2019 – March 2020

THE ROCK YOUTH CENTER

- Provided my free time to aid in the cultivation of a young mind in all his subjects, focusing more time in math and sciences.
- Developed relationships with students and helped spark a hope for a future in STEM.



ADDITIONAL EXPERIENCE

Society of Physics Students Treasurer

February 2020 – Present

UNDERGRADUATE RESEARCHER, MSU

- Organized and innovated ways to inspire ungraduated physics students to stay involved in both academics and social opportunities provided by the college.
- Developed and managed the collection of funds of an espresso machine, developing a python script to automate the simple processes.
- Completed multiple forms and attended meetings to upkeep registration of club, apply for funding, and reregister club under different formalization.

Maintenance Overseer June 2017 – August 2017 & May 2018 – August 2020

YELLOWSTONE ALLIANCE ADVENTURES MOUNTAIN CAMP

- Developed leadership and hard skills to tackle a variety of skills
- Lead groups of five to twenty individuals with little to no experience under a common, unrelated goal to accomplish potentially dangerous tasks vital to the success of the camp
- Learned and taught complex skills, often developed by myself, outside the realm of experience of myself and others under pressure and tight time restraints.
- Studied and reported necessary next steps to invest in to ensure company success.



COMPUTER PROFICIENCY

- Proficient in the following languages: Python, Java, C, C#, HTML
- LaTeX, Mathematica, MATLAB, Microsoft Office Suite
- Extensive computer science theory training
- Windows/Linux command line proficiency
- Arduino, breadboard, and computer systems experience
- Audio, video and acoustics design experience



MATHEMATICS TRAINING

- Dynamical Systems
- Linear Algebra – multidimensional systems and statistical analysis
- Multivariable Calculus
- Differential Equations – ODE and PDE
- Computer aided analytical solutions to Differential Equations
- Proficient in proof writing and reading



AWARDS AND GRANTS

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| – Montana University Systems Scholarship | Awarded for August 2018 – May 2022 |
| – Asbridge Physics Scholarship | Awarded for August 2020 – May 2021 |
| – Bertha Feaster Scholarship | Awarded for August 2020 – May 2022 |