

William V. Jardee

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EDUCATION	Montana State University , Bozeman, MT <i>B.S., Summa Cum Laude</i> , Professional Physics Phi Kappa Phi Honors Society Minors in: Computer Science, Mathematics, GPA: 3.94/4.0 (Expected) May 2022
	Great Falls High School , Great Falls, MT <i>High School Diploma, Honors</i> National Honors Society Concentration: STEM GPA: 3.87/4.0 May 2018
PROJECTS	Relativistic Runaway Electrons and Lightning Discharge; A Qualitative Overview: A paper on the building blocks of the RREA Theory, alongside motivations, computational and experimental evidence. Survey of step leaders and the related TGF emissions.
	RREA Propagation Theory; A Theoretical and Computational Overview: A delve into the theoretical derivation of RREA theory and the implementation of complete Monte Carlo simulations of particle propagation in storm-clouds. (<i>Ongoing project</i>)
	Introduction to Computational Physics: An overview of Python, LaTeX, and other essential tools to computational sciences. The overview covers both fundamental concepts and detailed delves into specific topics. (<i>Ongoing project</i>)
TECHNICAL SKILLS	Languages: Python, Java, C/C++, Matlab, Mathematica, GitHub, LaTeX, HTML, CSS, Excel, Photoshop Mathematics: Linear Algebra, Dynamical/Chaotic Systems, Computation Theory Physics: Particle Physics, Observational Astronomy
TEACHING EXPERIENCE	Hillman Scholars Tutor <i>Allen Yarnell Student Success Center, Montana State University, Bozeman</i> Educated underprivileged college students in introductory math, physics, computer science, and humanities courses. July 2021 - Present
	Math Stats Center Tutor <i>Mathematics Department, Montana State University, Bozeman</i> Guided students to discover their own answers and understanding in classes ranging from introductory algebra to differential equations. Aug 2021 - Present
	Proctor/Grader (PHSX 207) <i>Physics Department, Montana State University, Bozeman</i> Graded weekly homework and exams of algebra based introductory physics course. Jan 2021 - May 2021
	Student Lab Assistant (PHSX 205) <i>Physics Department, Montana State University, Bozeman</i> Guided students of the introductory physics course through kinematic labs during a weekly lab. Aug 2020 - Nov 2020

Smarty Cats Tutor

Allen Yarnell Student Success Center, Montana State University, Bozeman

Made and personalized appointments with student to cover essential STEM topics.

Aug 2019 - May 2020

Volunteer STEM Tutor

The Rock Youth Center, Bozeman, MT

Held open tutoring hours for high school students who struggle in STEM subjects.

Oct 2019 - March 2020

**RESEARCH
EXPERIENCE****Undergraduate Researcher**

Dr. John Sample's Lab, Montana State University, Bozeman

Analyzed the performance of a soft x-ray spectrometer to be attached to the IMPRESS CUBE-SAT.

Aug 2020 - Dec 2020

Undergraduate Researcher

Dr. Rufus Cone's Lab, Montana State University, Bozeman

Studied the theory behind and attempted to use an ellipsometer to measure the thickness of thin wafers.

Jan 2020 - Apr 2020

**MISC
EXPERIENCE
(PHYSICS)****SPS Treasurer**

Society of Physics Students at Montana State University, Bozeman

Handled club finances and lead many efforts in stirring interest in science communication and computational physics.

Feb 2020 - Jan 2022

Advanced Physics Lab

Instructed Course, Montana State University, Bozeman

Used sophisticated particle trapping apparatuses and computational methods to measure the mass of picogram scale particles.

Aug 2021 - Dec 2021

**MISC
EXPERIENCE
(NON-PHYSICS)****Mod Team Lead**

Walmart, Bozeman, MT

Was responsible for overseeing a team of multiple members to update store wide price modules, seasonal displays, and backroom equipment storage. Was responsible of corresponding with night and day managers to create a plan of loaning team members to pick up slack.

April 2020 - Aug 2020

Maintenance

Yellowstone Alliance Adventures Mountain Camp

Held partial to full responsibility for the maintenance of a multiple acre mountain camp. Included 24 hour availability in case of emergencies, training of unskilled personal, and delegation of tasks according to important.

June 2017 - Aug 2017, May 2018 - Aug 2020

Volunteer Tech Crew

Belgrade Church, Chi Alpha Ministries, Yellowstone Alliance Adventures Camp

Ran sound mixing for a live band weekly. Modified the audio and visual media setups to provide optimal sound quality, display, musician functionality, and integratability with online formats.

May 2018 - Jan 2020

Volunteer Employee

Rescue Mission, Great Falls, MT

Volunteered for the thrift store and soup kitchen for about 30 hours a week, for 4 weeks.

Dec 2019 - Jan 2020

Certifications	CPR and First Aid Certifications	<i>June 2019</i>
AWARDS/ GRANTS	Physics Departmental Scholarship	<i>Aug 2021</i>
	<i>Norman Mac Rugheimer Scholarship</i>	<i>Aug 2020</i>
	<i>Asbridge Physics Scholarship</i>	<i>May 2018</i>
	Montana University Systems Scholarship	<i>May 2018</i>
	Bertha Feaster Scholarship	<i>May 2018</i>
POSTERS/ PRE- SENTATIONS	SPS Undergraduate Colloquium	
	<i>RREA Propagation Theory</i>	<i>Oct 2021</i>
	<i>The Better Poster Design</i>	<i>Feb 2021</i>
	<i>Teaching Yourself Computer Languages</i>	<i>Feb 2021</i>
	<i>Introduction to Python</i>	<i>Feb 2021</i>
	<i>The Basics of Climate Physics</i>	<i>Sept 2020</i>
OUTREACH	Museum of the Rockies	
	<i>Grossology</i>	<i>Oct 2021</i>
	Society of Physics Students	
	<i>Liquid Nitrogen Ice Cream</i>	<i>Oct 2021</i>
	<i>Careers in Industry Panel; Moderator</i>	<i>Oct 2020, Mar 2021</i>
INTERESTS	Science communication, computational physics, particle physics, chaotic systems, RREA propagation theory	