CURRICULUM VITAE

Ian Q. Snider

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EDUCATION

Washington University in St. Louis, *St. Louis, MO* *Expected: May 2025*
B.S. Mechanical Engineering GPA: 4.00/4.00

Truman State University, *Kirksville, MO* *Expected: May 2024*
B.A. Physics, Mathematics minor GPA: 3.88/4.00

- Physics/Engineering Dual-Degree Program with Washington University in St. Louis

PROFESSIONAL EXPERIENCE

Brookhaven National Laboratory - *Student Collaborator*, *Upton, NY* *Sum 2023*

- Supplementary Undergraduate Research Program (SURP) (see: *Resonance Capture Widths for the Bayesian Resonance Reclassifier*)

Brookhaven National Laboratory - *Student Collaborator*, *Upton, NY* *Sum 2022*

- Science Undergraduate Laboratory Internship (SULI) program. A 10 week internship at the National Nuclear Data Center (NNDC) researching machine learning in nuclear physics. (see: *Accuracy Correlation in Neutron Resonance Reclassification*)
- Wrote a detailed research report and presented my summer work to a laboratory audience

RESEARCH

Accuracy Correlation in Neutron Resonance Reclassification *Summer 2022*
Faculty mentor: Gustavo Nobre - *NNDC, Brookhaven National Laboratory*

- Used machine learning to develop an algorithm for correcting neutron resonances
- Explored Python machine learning methods
- Learned how properties of isotopes were reflected in an algorithm's success

- Developed an iterative learning method for incrementally improving the success of an algorithm

Interface for Starlink Satellite Observations *August 2021 - March 2022*
Faculty mentor: Vayujeet Gokhale - *Dept. of Physics, Truman State University*

- Developed a user interface with Python for planning satellite observations

SKILLS

- **Coding Languages:** Python, C, C++, Shell scripting, LaTeX, HTML, Octave, Mathematica
- **Processing/Editors:** Microsoft Office, Vim
- **Technical/Laboratory:** Technical writing, basic analog & digital electronics
- **Other:** Linux command line, Computer clusters, Git

RELEVANT COURSEWORK

- **Physics:** Physics I & II, Vibrations & Waves, Intermediate Laboratory, Modern Physics I & II, Electronics, Mathematical Physics, Classical Mechanics, Electricity & Magnetism
- **Engineering:** Statics and Mechanics of Materials, Computer Aided Design, Thermodynamics, Fluid Mechanics, Solid Mechanics, Vibrations
- **Mathematics:** Calculus I, II, & III, Foundations of Mathematics, Linear Algebra, Ordinary Differential Equations, Statistics, Methods of Optimization
- **Computer Science:** Foundations of Computer Science I & II (C++), Computing Structures
- **Other:** Chemical Principles 1

ACTIVITIES

Society of Physics Students - *Demo Chair* *2020 - 2023*

- Organize and perform physics demos
- Inform/encourage students to engage in research activities
- Weekly commitment to volunteer physics tutoring
- Wrote and proctored an exam for Science Olympiad ("Crave the Wave")

Dark Sky TSU *Fall 2021 - Spring 2022*

- Group at Truman State University dedicated to light pollution education and outreach

CONFERENCES

- American Physical Society - Division of Nuclear Physics Fall 2022 meeting. Hyatt Regency Hotel, New Orleans, LA, October 29-31.

AWARDS & HONORS

- **CEU22 Award** *August 2022*

  (Conference Experience for Undergraduates) Competitive research abstract award. An invitation to the poster presentation at the APS DNP Fall 2022 meeting in New Orleans, LA.

- **Sigma Pi Sigma Honor Society** *May 2022*

  Recognized for service and academic scholarship in physics.