Curriculum Vitae
Spencer Riley

(505) 205 - 9115 | sriley.dev | academic@sriley.dev
github.sriley.dev | board.sriley.dev

**Development Experience**

C | Javascript | Python | R | Java | Bash | HTML | sklearn | TensorFlow | Docker | Flask | GCloud | GitHub | Kubernetes | Raspberry Pi | Arduino

# Work History

24 Aug 2022 – **Teacher Assistant** — **Montana State University**

29 Jul 2022 – 23 May 2022 — **Post-Bachelor's Researcher** — **Institute of Complex Additive Systems Analysis**

22 May 2022 – 05 Sep 2017 — **Research Intern**
The position involved tasks regarding a variety of different projects around the theme of complex systems analysis. As a part of a team, I have worked on projects regarding data preprocessing for language detection models, analysis of RF and Bluetooth models, and Internet-Of-Things research and development.

16 Aug 2017 – 06 Sep 2016 — **High School Work Study** — **National Security Agency**
The position required a thorough background check, federal investigation including a polygraph, as part of the application in order to obtain Top Secret security clearance. Most of the tasks that were assigned revolved around clerical work, specifically inventory and data transfer requests added with Inspector General inspection preparations.

# Education

Present – *Aug 2022* — **Ph.D. Physics** — **Montana State University**
Dissertation in TBA
**GPA:** TBA

May 2022 – Aug 2017 — **B.Sc. Physics** — **New Mexico Institute of Mining and Technology**
Astrophysics and Atmospheric Physics Option
Minor in Mathematics
**GPA:** 3.28

# Publications

18 Mar 2022 — **Atmospheric precipitable water vapor and its correlation with clear-sky infrared temperature observations**
*Vicki Kelsey, Spencer Riley, Kenneth Minschwaner*
Atmospheric Measurement Techniques
`10.5194/amt-15-1563-2022`

# Presentations

Apr 2022, Lubbock, TX — **The Precipitable-Water Model Analysis Tool: An open-source suite for estimating precipitable water with low-cost instrumentation.**
*Spencer Riley, Vicki Kelsey*
National Weather Service, 5th Texas Weather Conference

Apr 2022, Lubbock, TX — **Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Observations**
*Vicki Kelsey, Spencer Riley*
National Weather Service, 5th Texas Weather Conference

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Jan 2020, Boston, MA — **Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Readings**
*Vicki Kelsey, Spencer Riley*
American Meteorological Society Annual Meeting 100

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Nov 2019, Providence, RI — **Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Readings: Data Analysis**
*Spencer Riley, Vicki Kelsey*
Physics Congress 2019

# Research Projects

Present – Jan 2019 — **The Precipitable Water Project**
This research is based on developing a computational model of the relationship between daily precipitable water measurements and the atmospheric temperature. The goal of this research is to develop and utilize the relationship using low-cost instrumentation to deduce the amount of precipitable water from the effective temperature.
**Collaborators:** *Vicki Kelsey, Dr. Kenneth Minschwaner*
**Documentation Page:** `pmat.app`

## Development Projects

Maintained
**v**1.0.1

**pacviz**
A R package comprised of informal, radial data visualizations for regression and comparative analysis.
**Documentation Page:** `pacviz.sriley.dev`

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Maintained
**v**2.0

**Precipitable-Water Model Analysis Tool**
An open source software suite for the analysis of precipitable water.
**Documentation Page:** `docs.pmat.app`