Curriculum Vitae
Spencer Riley

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**Development Experience**

C | Flutter | Javascript | Java | Python | R | Bash | HTML | Docker | Kubernetes | Android | Arduino | Raspberry Pi

# Work History

Present – 24 Aug 2022
**Graduate Teacher's Assistant** — **Montana State University**

29 Jul 2022 – 22 May 2022
**Post-Bachelor's Researcher** — **Institute of Complex Additive Systems Analysis**

**Research Intern**
During my time in this position, my contributions to projects I have worked on include:

- Data preprocessing for language detection models
- Developing analytical methods for RF and Bluetooth models
- Internet-Of-things research and metadata configuration
- Writing Helm Charts for several Kubernetes applications

The last project I worked on applied acoustic analysis as a method to detect aircraft.

16 Aug 2017 – 06 Sep 2016
**High School Work Study** — **National Security Agency**
As a requirement of this position, I had to pass a background check and a federal investigation to obtain a Top Secret security clearance. The tasks I was assigned involved clerical work relating to inventory, data transfer requests, and documentation management. In addition, I was a part of the effort to prepare for the Inspector General's inspection.

# 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, 5$^{th}$ 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, 5$^{th}$ Texas Weather Conference

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

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**
The purpose of the research is to develop a method to estimate the amount of precipitable water from the effective temperature using low-cost instrumentation. As a part of the data collection process, we collected daily ground and sky temperatures to be analyzed by our preprocessing and analysis software suite.
**Collaborators:** *Vicki Kelsey, Dr. Kenneth Minschwaner*
**Documentation Page:** `pmat.app`

## Development Projects

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`

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Not Maintained
**v**1.0.2

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