# Spencer Riley


(505)205-9115

sriley.dev

academic@sriley.dev

github.sriley.dev

board.sriley.dev


## Development Experience

C | Flutter | Javascript | Java | Python | R | IDL

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

# Spencer Riley

## 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

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
v2.0

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

Not Maintained
v1.0.2

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