



# Spencer Riley

(505)205-9115

sriley.dev

academic@sriley.dev

github.sriley.dev

board.sriley.dev

## Development Experience —

C Javascript Python R

Bash HTML

sklearn TensorFlow

Docker Flask GCloud GitHub

Raspberry Pi Arduino

## Currently Learning —

Java Flutter

TensorFlow Quantum QISKit

Kubernetes

Android

## Work History

### Present

05 Sep 2017

#### Research Intern

Institute of Complex Additive Systems Analysis

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

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

### Published

#### 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<sup>th</sup> 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<sup>th</sup> 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

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  
v1.0.1

### pacviz

A R package comprised of informal, radial data visualizations for regression and comparative analysis.

**Documentation Page:** `pacviz.sriley.dev`

---

Maintained  
v2.0

### Precipitable-Water Model Analysis Tool

An open source software suite for the analysis of precipitable water.

**Documentation Page:** `docs.pmat.app`