





# Spencer Riley

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## 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	Post-bachelor's Researcher	Institute of Complex Additive Systems Analysis
23 May 2022		
22 May 2022	Research Intern	Institute of Complex Additive Systems Analysis
05 Sep 2017		
16 Aug 2017	High School Work Study	National Security Agency
06 Sep 2016		

## Education

Present	Ph.D. Physics	Montana State University
Aug 2022	Dissertation in TBA	GPA: TBA
May 2022	B.Sc. Physics	New Mexico Institute of Mining and Technology
Aug 2017	Astrophysics and Atmospheric Physics Option	GPA: 3.28
	Minor in Mathematics	

## Publications

18 Mar 2022	<b>Atmospheric precipitable water vapor and its correlation with clear-sky infrared temperature observations</b> <i>Vicki Kelsey, Spencer Riley, Kenneth Minschwaner</i> Atmospheric Measurement Techniques 10.5194/amt-15-1563-2022
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## Presentations

Apr 2022 Lubbock, TX	<b>The Precipitable-Water Model Analysis Tool: An open-source suite for estimating precipitable water with low-cost instrumentation.</b> <i>Spencer Riley, Vicki Kelsey</i> National Weather Service, 5 <sup>th</sup> Texas Weather Conference
Apr 2022 Lubbock, TX	<b>Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Observations</b> <i>Vicki Kelsey, Spencer Riley</i> National Weather Service, 5 <sup>th</sup> Texas Weather Conference
Jan 2020 Boston, MA	<b>Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Readings</b> <i>Vicki Kelsey, Spencer Riley</i> American Meteorological Society Annual Meeting 100
Nov 2019 Providence, RI	<b>Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Readings: Data Analysis</b> <i>Spencer Riley, Vicki Kelsey</i> 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

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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`