

Curriculum Vitae  
Spencer Riley



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## Development Experience

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

## Work History

Present	<b>Graduate Teacher's Assistant</b>	Montana State University
24 Aug 2022		
29 Jul 2022	<b>Post-Bachelor's Researcher</b>	Institute of Complex Additive Systems Analysis
22 May 2022	<b>Research Intern</b>	
05 Sep 2017	During my time in this position, my contributions to projects I have worked on include: <ul style="list-style-type: none"><li>• Data preprocessing for language detection models</li><li>• Developing analytical methods for RF and Bluetooth models</li><li>• Internet-Of-things research and metadata configuration</li><li>• Writing Helm Charts for several Kubernetes applications</li></ul> The last project I worked on applied acoustic analysis as a method to detect aircraft.	
16 Aug 2017	<b>High School Work Study</b>	National Security Agency
06 Sep 2016	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

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Present	<b>Ph.D. Physics</b>	Montana State University
Aug 2022	Dissertation in TBA	<b>GPA: TBA</b>

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May 2022	<b>B.Sc. Physics</b>	New Mexico Institute of Mining and Technology
Aug 2017	Astrophysics and Atmospheric Physics Option Minor in Mathematics	<b>GPA: 3.28</b>

## Publications

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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

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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

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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
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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
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## Research Projects

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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`

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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`