

#### 22 May 2022 Research Intern

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

- 05 Sep 2017 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 High School Work Study

National Security Agency

06 Sep 2016 to

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

### **Publications**

Atmospheric precipitable water vapor and its correlation with clear-sky 18 Mar 2022

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, $5^{th}$ 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		

Physics Congress 2019

## Research Projects

Present

#### The Precipitable Water Project

Jan 2019

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

Precipitable-Water Model Analysis Tool

v2.0 An open source software suite for the analysis of precipitable water.

Documentation Page: docs.pmat.app

Not Maintained  $\mathbf{v}1.0.2$ 

pacviz

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

comparative analysis.

Documentation Page: pacviz.sriley.dev