

Curriculum Vitae
Spencer Riley



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Development Experience

C Javascript Python R Java Bash HTML sklearn TensorFlow Docker Flask
GCloud GitHub Kubernetes Raspberry Pi Arduino

Work History

	Teacher Assistant	Montana State University
24 Aug 2022		
29 Jul 2022	Post-Bachelor's Researcher	Institute of Complex Additive Systems Analysis
23 May 2022		
22 May 2022	Research Intern	
05 Sep 2017	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	High School Work Study	National Security Agency
06 Sep 2016	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

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 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

Presentations

Apr 2022 **The Precipitable-Water Model Analysis Tool: An open-source suite for estimating precipitable water with low-cost instrumentation.**
Lubbock, TX *Spencer Riley, Vicki Kelsey*
National Weather Service, 5th Texas Weather Conference

Apr 2022 **Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Observations**
Lubbock, TX *Vicki Kelsey, Spencer Riley*
National Weather Service, 5th Texas Weather Conference

Jan 2020 **Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Readings**
Boston, MA *Vicki Kelsey, Spencer Riley*
American Meteorological Society Annual Meeting 100

Nov 2019 **Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Readings: Data Analysis**
Providence, RI *Spencer Riley, Vicki Kelsey*
Physics Congress 2019

Research Projects

Present **The Precipitable Water Project**
Jan 2019 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