Curriculum Vitae
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
23 May 2022

Post-bachelor's Researcher — Institute of Complex Additive Systems Analysis

22 May 2022
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

Present
Aug 2022

Ph.D. Physics — **Montana State University**
Dissertation in TBA
TBA
GPA:

May 2022
Aug 2017

B.Sc. Physics — **New Mexico Institute of Mining and Technology**
Astrophysics and Atmospheric Physics Option
Minor in Mathematics
3.28
GPA:

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, 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, 5th 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, 5th 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

Research Projects

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`