Spencer Riley

📞 (505)205-9115

🌐 sriley.dev

@ academic@sriley.dev

⭘ github.sriley.dev

⬤ board.sriley.dev

Development Experience ——

`C` `Javascript` `Python` `R`

`Bash` `HTML`

`sklearn` `TensorFlow`

`Docker` `Flask` `GCloud` `GitHub`

`Raspberry Pi` `Arduino`

Currently Learning ——————

`Java`

`TensorFlow Quantum`

`QISKit` `Kubernetes`

`Android`

Work History

Present	**Research Intern**	**Institute of Complex Additive Systems Analysis**
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

May 2022	**B.Sc. Physics**	**New Mexico Institute of Mining and Technology**
Aug 2017	Astrophysics and Atmospheric Physics Option Minor in Mathematics **GPA:** 3.26	

Publications

Under Review — **Atmospheric Precipitable Water and its Correlation with Clear Sky Infrared Temperature Observations**
Vicki Kelsey, Spencer Riley, Kenneth Minschwaner
Atmospheric Measurement Techniques
`10.5194/amt-2021-130`

Presentations

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

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Development Projects ———

AtmosAccess:

A Python package to retrieving atmospheric data. The goal of this project is to easily connect with the NOAA Data Access API and the Suominet database to consolidate PMAT dependencies.

> Python | atmospheric data

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pacviz:

A R package comprised of informal, radial data visualizations for regression and comparative analysis.
docs: `pacviz.sriley.dev`

> R | visualization

Precipitable-Water Model Analysis Tool:

An open source software suite for the analysis of precipitable water.
docs: `docs.pmat.app`

> R | Python | Docker
> regression analysis

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:** `docs.pmat.app`