Savannah L. Ferretti

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SKILLS

Python (PyTorch, PySR, Dask, Xarray, Pandas, Cartopy, Matplotlib) • Bash • Git/GitHub • High-Performance/Distributed Computing • NetCDF/HDF5/Zarr • Linux • Microsoft Excel (Certified Specialist) • LaTeX • WordPress

EXPERIENCE

Graduate Student Researcher   Sep 2021–Present
Pritchard & Baldwin Labs, University of California, Irvine   Irvine, CA

- Developed statistical & machine learning models to analyze variability in South Asian monsoon rainfall using large-scale reanalysis & satellite datasets
- Quantified uncertainty & evaluated predictive skill across model configurations for robustness
- Built open-source, scalable Python workflows for parallel processing in HPC environments
- Communicated findings through peer-reviewed publications & conference presentations

Consulting Analyst   Mar–Aug 2021
Higher Education Research Services, Huron Consulting Group   New York, NY

- Built Excel-based financial planning and reporting tools for a research nonprofit
- Developed long-term resource forecasts and presented recommendations to executive stakeholders

Undergraduate Research Assistant   Jun–Aug 2020
Commane Lab, Lamont-Doherty Earth Observatory   Palisades, NY

- Quantified changes in atmospheric methane concentrations during the NYC COVID-19 shutdown
- Applied meteorological analysis & transport modeling to attribute emissions to likely source regions

SELECTED PUBLICATIONS

S. L. Ferretti, J. Lin, S. Shamekh, J. W. Baldwin, M. S. Pritchard, & T. Beucler. (2026). **Data-driven integration kernels for interpretable nonlocal operator learning**. In review at *Environ. Data Sci.*

S. L. Ferretti, M. S. Pritchard, F. Ahmed, L. Peng, & J. W. Baldwin. (2025). **Explaining South Asian monsoon rainfall seasonality using a metric of plume buoyancy**. *Geophys. Res. Lett.*

S. Yu, W. M. Hannah, L. Peng, …**S. L. Ferretti**, …& M. S. Pritchard. (2023). **ClimSim: A large multi-scale dataset for hybrid physics−ML climate emulation**. *NeurIPS 2023 Datasets & Benchmarks Track*, **Outstanding Paper Award**.

EDUCATION

Ph.D. in Earth System Science, University of California, Irvine   Expected Jun 2026

M.S. in Earth System Science, University of California, Irvine   Dec 2023

B.S. in Earth & Atmospheric Sciences, Cornell University   Dec 2020