

Stephen Huysman

Data Engineer | ML Engineer | Scientific Software Developer

📍 Bozeman, MT (Remote / Open to Relocation) ✉ shuysman@gmail.com 🌐 www.huysman.net

🔄 shuysman

Skills

Python: PyTorch, scikit-learn, XGBoost, Pandas, NumPy, GeoPandas, GDAL, Rasterio, Xarray

R: terra, sf, raster, rayshader, tidyverse

Infrastructure: Linux, Bash, Docker, AWS (S3, Fargate, ECR, Step Functions, Lambda)

Databases: PostgreSQL, MySQL, SQLite, SQL

Experience

Data Management/Scientist, Northern Rockies Conserv. Coop. – Bozeman, MT June 2024 – present

- Architected and deployed fault-tolerant geospatial forecasting system on AWS Fargate with automated workflow orchestration.
- Developed 1m-resolution water balance model integrating LiDAR terrain data and gridded climate inputs.
- Developing PyTorch LSTM model for streamflow forecasting, synthesizing meteorological inputs and streamgage records.

Graduate Research & Teaching Assistant, Montana State University – Bozeman, MT Aug 2022 – June 2025

- Developed high-resolution geospatial models for climate refugia mapping using hydrologic water balance modeling.
- Built custom R packages for spatial analysis integrating climate, topography, and disturbance data.
- Ran geospatial workflows, model fitting, and water balance simulations on university SLURM cluster.
- Led 4 undergraduate lab sections for Plant Systematics and Seed Plant Identification (~25 students/semester).

Senior Programmer/Analyst, Stony Brook Medicine – Stony Brook, NY Jan 2019 – May 2021

- Administered 192-core HPC cluster, migrating workflows from legacy Sun Grid Engine to SLURM.
- Managed full hardware lifecycle for research computing nodes, including physical racking, provisioning, kernel parameter tuning, and UPS configuration.
- Implemented HIPAA-compliant disaster recovery for 120TB clinical research data with automated backups.
- Modernized legacy infrastructure by containerizing workflows (Docker) and deploying AWX for configuration management.
- Developed Django web applications for HR and research data management, serving ~50 clinical and research faculty.
- Mentored student programmers, establishing code review and Git workflows.

Education

Montana State University, M.S. in Biological Sciences – Bozeman, MT 2022 – 2025

- Thesis: Mapping Climate and Disturbance Refugia for Conservation of Whitebark Pine

Cornell University, B.S. in Plant Sciences – Ithaca, NY 2007 – 2011