Shale Hunter

Bozeman, MT
Shale@bren.ucsb.edu | (505) 690-6324 | hub-shale.github.io

SUMMARY OF QUALIFICATIONS

- Project management for data science, including instruction, collaboration, code sharing, GitHub
- Development and evaluation of machine learning models in Python and R
- Operationalization of processes and workflow development for data and metadata publication
- Best practices for habitat monitoring, data analysis, data coordination, and database management.
- Data collection (+QA/QC) for field ecology in desert and rangeland ecosystems

EDUCATION

Master of Environmental Data Science (June 2022)
Bren School of Environmental Science & Management – University of California, Santa Barbara

Honors & GPA: Bren Recruitment Fellowship Recipient, GPA 4.0
Highlighted Coursework: Machine Learning in Environmental Science, Remote Sensing, Spatial Analysis, Environmental Policy Evaluation, Data Modeling & Data Semantics, Analytical Workflows & Scientific Reproducibility, Meta-Analysis & Systemic Reviews, Statistics for Environmental Data Science, Modeling Environmental Systems, Text Analysis

Bachelor of Science in Biology-Psychology (February 2020)
Bachelor of Arts in Chinese Language and Cultural Studies (February 2020)
Tufts University, Medford, MA

Honors & GPA: Dean's List (all semesters), Magna Cum Laude, GPA 3.71
Leadership: Tufts Mountain Club Program Director, 2017–2018

MASTER'S CAPSTONE PROJECT IN MACHINE LEARNING

A Reproducible Machine Learning Approach for Ecohydrologic Model Outputs (1/22–6/22)
Role: Project Manager **| Client:** Tague Team Ecohydrology Lab

- Managed a 4-person team under a strict deadline to deliver client products using collaborative tools such as GitHub, ZenHub, Slack, and Zoom
- Built and evaluated performance of random forest and gradient boosting machine learning algorithms on a complex environmental dataset to facilitate use and comprehension by non-experts
- Created 5 reproducible workflows in R and a Shiny app for interpreting and visualizing machine learning model output in an ecological context by model users
- Delivered a joint presentation describing our technical products and their importance to a diverse group of agencies, stakeholders, scientists, planners, policymakers, and students

TECHNICAL SKILLS & CERTIFICATIONS

Technical: R, Python, SQL, GitHub, ESRI suite (ArcGIS Desktop/Online/Pro/Collector), Google Earth Engine, AWS (basic), Unix, LaTeX, Tableau, WordPress
Language: Proficient in Mandarin Chinese, Intermediate Spanish (CLEP 52)
Certifications: UTV Certified Operator, Wilderness First Aid, AIARE Avalanche Rescue

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ECOLOGY EXPERIENCE

Data Management Fellow (6/22-Present)
Environmental Data Initiative, Remote

- Coordinated data curation, management, and QA/QC with teams across multiple universities for 8 types of quantitative riverine data
- Improved existing R workflows to operationalize metadata creation based on FAIR data principles for personal and institutional efficiency
- Worked cooperatively with a team of scientific researchers, librarians, and students to deliver robust open access data products with detailed data provenance tracking

Ecological Monitoring Technician (2/21–7/21)
Great Basin Institute, Las Vegas, NV

- Collected Terrestrial AIM data in partnership with BLM and USGS, in line with best practices for habitat monitoring protocol design, data collection, stewardship, reporting, and synthesis
- Performed daily, weekly, monthly, and seasonal Quality Assurance and Quality Control (QA/QC) tasks to ensure consistent data quality and accuracy
- Coordinated data collection efforts across 4 crews for efficient sampling

Ecological Monitoring Crew Member (5/20–11/20)
Southwest Conservation Corps, Socorro, NM

- Analyzed environmental health trends by the Describing Indicators of Rangeland Health framework
- Performed spatial analysis with ArcGIS Online and Collector to identify, navigate to, and collect botanical, geological, and soils data at 72 field sites
- Participated in and provided feedback on the BLM's AIM (Assessment, Inventory, and Monitoring) protocol, a collaborative nationwide ecosystem monitoring framework

Research Assistant, Lewis Biology Lab (1/18–5/18)
Tufts University, Medford, MA

- Scraped Twitter data to analyze the effects of artificial light on firefly phenology to benefit ecological-minded urban planning
- Developed and executed a 5-month R-based pipeline of data mining, exploration, cleaning, wrangling, and analysis to deliver case study results to act as a basis for further research
- Designed presentations and data visualizations in R and Tableau to communicate results to diverse stakeholders including lab PIs, graduate/undergraduate students, and the public

ADDITIONAL EXPERIENCE

Independent Contractor - Data Science (part time), Adventure Scientists, Bozeman, MT (7/22)
Teaching Assistant, UCSB Communications Department, Santa Barbara, CA (1/22–6/22)
Teaching Assistant, UCSB Art History Department, Santa Barbara, CA (9/21–12/21)
Instructor, Experimental College, Tufts University, Medford, MA (1/19–12/19)
Assistant Manager, Outdoor Regear, Albuquerque, NM (5/18–8/18)
English Teacher, Xindu Number 1 Middle School, Chengdu, China (2/16–7/16)