Shale Hunter

Santa Barbara, CA

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

SUMMARY OF QUALIFICATIONS

- Open Science best practices including version control and code sharing on GitHub, data and metadata sharing in domain repositories
- Development and evaluation of machine learning models in Python and R
- Analysis, wrangling, and management of diverse data types at scale (1 million+ observations)
- Data collection (+QA/QC) for field ecology in desert and rangeland ecosystems
- 3+ years of teaching experience across the fields of Communications, Foreign Language, Survival Skills, Botany, Film, and Art History

EDUCATION

Master of Environmental Data Science (Expected 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, Data Modeling & Data Semantics, Analytical Workflows & Scientific Reproducibility, Meta-Analysis & Systemic Reviews, Remote Sensing, Spatial Analysis, Environmental Policy Evaluation, Statistics for Environmental Data Science, Modeling Environmental Systems

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

Developing a Reproducible Machine Learning Approach to Ecohydrologic Model Outputs for Forest Ecosystems (1/22–Present)
Role: Project Manager **| Client:** Tague Team Ecohydrology Lab

- Built and evaluated relative performance for Random Forest, Gradient Boosting, and Neural Net machine learning algorithms on a complex environmental dataset
- Created a reproducible workflow in R and RShiny app for interpreting and visualizing machine learning model output in an ecological context
- Coordinated a 4-person team under a strict deadline to deliver client products using collaborative tools such as GitHub, ZenHub, Slack, and Zoom
- Researched academic and industry best practices for practical and statistical evaluation of machine learning models, including hyperparameter tuning

ECOLOGY EXPERIENCE

Ecological Monitoring Technician (2/21–7/21)
Great Basin Institute, Las Vegas, NV
- Collected Terrestrial AIM data in partnership with Nevada BLM and USGS, including techniques such as: native, invasive, and rare plant identification of 300+ plants to species level, botanical diversity surveys and community mapping, plant pressing, use of dichotomous keys
- Performed daily, weekly, monthly, and seasonal Quality Assurance and Quality Control (QA/QC) tasks to ensure consistent data quality and accuracy
- Excelled in unsupervised and semi-supervised work environments in the field

Ecological Monitoring Crew Member (5/20–11/20)
Southwest Conservation Corps, Socorro, NM
- Rigorously followed field safety and reporting protocols, including COVID-19 protocols, to mitigate risks and ensure my team could continue work during a global pandemic
- Identified ecological sites, soil texturing by hand, soil pit characterization, soil stability testing
- Performed spatial analysis with ArcGIS Online and Collector to identify, navigate to, and collect botanical, geological, and soils data at 72 field sites

Research Assistant, Lewis Biology Lab (1/18–5/18)
Tufts University, Medford, MA
- Assisted in experimental design and implementation investigating phenology of Photuris larvae, including hands-on research methodology and Twitter-based large scale data collection
- Developed and executed a 5-month R-based pipeline of data mining, exploration, cleaning, wrangling, analysis, visualization, and presentation
- Collaborated as part of a team of experts to communicate the design of several projects simultaneously across different schedules and scopes of research

ADDITIONAL EXPERIENCE

Teaching Assistant, UCSB Communications Department, Santa Barbara, CA (1/22–Present)
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)

TECHNICAL SKILLS & CERTIFICATIONS

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