Griffin Shelor

MS Graduate, Dept. of Geography
College of Science
University of Nevada Reno
Christiansburg, Virginia — griffinshelor@gmail.com — (512) 955-6269 —
https://www.linkedin.com/in/griffinshelor — https://github.com/gshelor

EDUCATION

University of Nevada, Reno: Fall 2023 - Summer 2025
Degree Earned: MS in Geography
Mackay School of Earth Sciences and Engineering, College of Science
Thesis: Evaluating the Representativeness of Snow Sampling Sites in the Western United States and Alaska: *ProQuest Link*
GPA: 4.0

Green Mountain College: Fall 2014, Spring 2016-Spring 2018
Degree Earned: BS in Biology and BS in Natural Resources Management
Double Minor in Chemistry and Math
GPA: 3.7759

EMPLOYMENT

Graduate Research Assistant
August 2025-December 2025
Oklahoma State University
Department of Geography
I modeled plant functional traits (N, P, K) using hyperspectral imagery in tallgrass prairie ecosystems, evaluated functional diversity using same functional traits, and took meeting notes and scheduled Zoom meetings for NASA-funded HI-GRASS project.

Geospatial Data Analyst
May 2025-August 2025
University of Nevada, Reno
Mountain Rain or Snow
I analyzed the spatial distribution of the accuracy of machine learning models for predicting precipitation phase as described in Jennings et al. 2025.

Data Analyst and Scientific Programmer
March 2024-September 2024
University of Nevada, Reno
Mountain Rain or Snow
I used citizen science data collected as part of the Mountain Rain or Snow project (MRoS) to investigate the relationship between probability of atmospheric river data, the Global Precipitation Measurement Mission's (GPM) Probability of Liquid Precipitation data product (PLP), and citizen science observations of precipitation phase in the Cascades and Sierra Nevada EPA Level III Ecoregions, with the primary goal of identifying lower and upper thresholds to use to separate the PLP values into predicted classes of rain, mixed precipitation, and snow.

Graduate Teaching Assistant
August 2023-May 2025
University of Nevada, Reno
Department of Geography
In Fall 2024 I lead lab instruction and hosted office hours as the TA for GEOG 416/616 (Spatial Analysis). As part of my duties for this course I provided R coding assistance to students during lab periods, hosted office hours to provide additional technical support, graded lab assignments, and proctored ex-

ams.
From Fall 2023-Spring 2024, I lead lab instruction for GEOG 405/605 (GIS I: Geographic Information Systems and Science) which involved preparing lab instructions to ensure they are free of errors and up to date with the latest ArcGIS software, providing introductions, feedback, and demonstrations during in-class lab periods, as well as grading lab assignments and troubleshooting technical difficulties with ArcGIS Pro, ArcGIS Online, ESRI Storymaps, and remote desktop software such as Microsoft Remote Desktop.
In Spring 2025, I lead lab instruction for GEOG 412/612 (Cartography) which involved supervising lab periods, providing introductions, feedback, and demonstrations during in-class lab periods, as well as grading assignments and troubleshooting technical difficulties with Adobe Illustrator.

GIS Team Lead
October 2022 - August 2023:
University of Vermont Spatial Analysis Lab
Rubenstein School of Environment and Natural Resources
In addition to my GIS Tech 2 duties, I lead editing operations on a wetlands mapping project for the Lamoille River watershed. I independently designed geoprocessing operations as well as trained new techs in the complex methods of wetlands mapping and reviewed their work and provided feedback using National Wetlands Inventory (NWI) guidelines as a framework. Additionally, I also trained other techs in general SAL standard operating procedures, reviewed their work and provided feedback to improve skills and technique, and troubleshooted technical issues and assisted on other SAL projects as needed.

GIS Tech 2
April 2022 - October 2022
University of Vermont Spatial Analysis Lab
Rubenstein School of Environment and Natural Resources
In addition to my duties as a GIS Tech 1, I assisted with individual projects and took on additional duties in data preparation and map creation.

GIS Tech 1
April 2021 - April 2022
University of Vermont Spatial Analysis Lab
Rubenstein School of Environment and Natural Resources
Digitized land cover features, performed basic geoprocessing, edited spatial databases, created maps, and analyzed LiDAR data.

Cartographic Technician
December 2018 - January 2021
U.S. Census Bureau
Utilized ArcGIS software & Census Bureau GIS software programs to analyze & solve complex problems including correction of legal boundaries, consulting with county contacts, digitizing geographic updates based on satellite imagery, & resolving data pertaining to public land boundaries.

Remote Sensing Intern
June 2018 - August 2018
NASA DEVELOP National Program
Conducted a supervised land cover classification in ArcMap 10.5, used Random Forest modeling to identify important predictor variables for a separate Random Forest model in Google Earth Engine, created fire masks to better identify possible bison-related disturbance, and assisted with the creation of several deliverables including a public-facing website image, a poster, a Powerpoint presentation, a technical report, as well as a documentation package with our data, other deliverables, and a README to be handed off to our project partners.

PUBLICATIONS

Technical Reports

LaRoe, J., **Shelor, G.**, Rasumussen, S., Schee, M. (2018). *Employing Landsat to Model Availability of Ephemeral Water Sources and Vegetation Change in Support of a USGS Feasibility Assessment and Management Strategy of Bison* [Unpublished Technical Report]. NASA DEVELOP National Program

RESEARCH EXPERIENCE

Masters Thesis: Evaluating the Representativeness of Snow Sampling Sites in the Western United States and Alaska
August 2023 - August 2025
University of Nevada, Reno
Modeling SWE_{max} across the western United States and Alaska, evaluating how key contributors to SWE_{max} vary across space and time, and investigating how representative current NASA SnowEx sites are of SWE classes across the western United States and Alaska

Creating Better Flood Inundation Maps with LiDAR Data and a Topographically-driven Model
Sep 2021 - Jan 2022
University of Vermont Spatial Analysis Lab
I used ArcGIS Pro to manually hydro-enforce LiDAR DEMs so that they properly reflected the topography of the landscape in order to maximize the accuracy of flood inundation modeling. *Link to Presentation*

Mapping Canine parvovirus in Mesocarnivores in Vermont
Jan 2018 - Dec 2018
Green Mountain College
Created cartographic products which were used to depict where scat samples were found, as well as which scat samples tested positively for Canine parvovirus (CPV). Provided geostatistical analysis of spatial autocorrelation of CPV throughout the southwestern region of Vermont.

TEACHING EXPERIENCE

GEOG 412/612- Cartography (Lab Section TA)
Spring 2025: University of Nevada, Reno

GEOG 416/616- Spatial Analysis (Lab Section TA)
Fall 2024: University of Nevada, Reno

GEOG 405/605- GIS 1: Geographic Information Systems and Science (Lab Section TA)
Fall 2023 - Spring 2024; University of Nevada, Reno

AWARDS AND HONORS

Eagle Award
May 2018
Green Mountain College

Excellence in Mathematics Award
May 2018
Green Mountain College

Natural Resources Management Senior Award
May 2018
Green Mountain College

Scholar-Athlete Award
May 2018
Green Mountain College

Scholar-Athlete Award
May 2017
Green Mountain College

GRANTS AND FELLOWSHIPS

UNR Graduate Student Association Travel Award
Year: 2025
UNR Graduate Student Association
Reno, NV
$500

CONFERENCE ACTIVITY

Posters Presented

Using SHAP to Derive Peak SWE-based Snow Cover Classes To Analyze Sampling Site Representativeness
May 2025
Western Snow Conference; Bozeman, MT

A LIDAR-Based Approach to Derivative Map Production and Visualizing Bedrock Topography Within The Towns of Proctor and Pittsford, Vermont, USA
May 2018
Spring 2018 Northeast Arc Users Group (NEARC) Conference; University of Connecticut, Storrs, CT

PROFESSIONAL SKILLS

Programming Languages
R, Python, Stan

Softwares/Technologies
RStudio, Positron, ArcGIS Pro, ArcPy, ESRI Storymaps, QGIS, Google Earth Engine (Python/Javascript), ENVI, Git/Github, OpenDroneMap, Pix4DMapper, Adobe Illustrator/Photoshop/InDesign, Microsoft Office

RELEVANT GRADUATE COURSEWORK

- **UNR**
- GEOG 607: Advanced GIS Analysis
- GEOG 611: Remote Sensing: Principles and Applications
- GEOG 613: UAS Technologies in Geography
- GEOG 616: Spatial Analysis
- GEOL 679: Python for Earth Sciences
- NRES 776: Ecological Forecasting
- NRES 779: Bayesian Hierarchical Modeling

PROFESSIONAL MEMBERSHIPS

American Association of Geographers: 2018 - Present
American Geophysical Union: 2022 - Present
Ecological Society of America: 2020 - Present

REFERENCES

Dr. Anne Nolin
Professor
anolin@unr.edu
775-682-8148

Dr. Ken Nussear
Associate Professor
knussear@unr.edu
775-784-6612

Dr. Scott Kelley
Associate Professor
scottkelley@unr.edu
775-784-6705

Anna Royar
GIS Specialist
anna.royar@uvm.edu
802-656-3007