

Geographer specializing in remote sensing applications for land and resource monitoring, conservation, and ecological disease surveillance. My work integrates both satellite- and UAV-based multispectral imaging with machine learning techniques to support sustainable management of natural resources and hydrological systems. Passionate about developing Python tools to automate workflows and promote accessibility to advanced analytical tools.

## EDUCATION

---

2026 (expected)	Master of Science, Geography University of Tennessee, Knoxville Topic: Satellite Anthrax Surveillance in Texas, USA Advisor: Dr. Hannah Herrero
2024	Bachelor of Science Geographic Information Science and Technology University of Tennessee, Knoxville <i>Magna cum laude</i>

## PROFESSIONAL AND TEACHING EXPERIENCE

---

2024 – Present	Graduate Teaching Assistant University of Tennessee, Knoxville Department of Geography and Sustainability <i>GEOG 413: Remote Sensing of the Environment</i> Overhauled lab curriculum to reflect industry standards; Introduced over 40 students to fundamentals of remote sensing <i>GEOG 314: Intro to Uncrewed Aerial Systems</i> Prepared students for the FAA Part 107 Knowledge Exam; Introduced students to professional/academic UAS applications
2024 – 2025	GIS Labs Assistant University of Tennessee, Knoxville Department of Geography and Sustainability Assisted Lab Manager with upkeep of over 60 department lab computers' hardware and software; Conducted field missions with department UAS technology in support of various research projects.

2024 (Aug.-Dec.)	<p>Education Collaboration at ORNL (ECO) Intern            Geospatial Science and Human Security Division            Mentor: Dr. Matt McCarthy</p> <p>Supported ongoing narcotics smuggling interdiction research with United States Coast Guard and Department of Homeland Security</p>
2024 (May-Aug.)	<p>Science Undergraduate Laboratory Intern (SULI)            Geospatial Science and Human Security Division            Mentor: Dr. Matt McCarthy</p> <p>Developed vessel-detection methods using deep learning techniques</p>
2023 – 2024	<p>Legal/Executive Assistant            Stephens &amp; DiRado, LLP            Knoxville, TN</p> <p>Served as main point of contact for the firm; prepared motions, orders, and briefs to be filed in criminal court</p>
2022-2023	<p>Environmental Compliance Intern            Knoxville Utilities Board            Department of Safety and Technical Services</p> <p>Created site maps for wastewater treatment facilities for annual compliance reports and developed a records-management system</p>
2021-2022	<p>Water Systems Engineering Intern            Knoxville Utilities Board            Department of Water Systems Engineering</p> <p>Digitized and catalogued all new and repaired assets in ArcGIS Enterprise system; Created project maps for engineers in the department</p>

## **AWARDS AND HONORS**

---

2025	Bruce Ralston Geospatial Achievement Award
2025	TN View Fellowship Recipient
2024	University of Tennessee GIS&T Student of Distinction

## **CONFERENCE PRESENTATIONS**

---

2026 (Upcoming)	American Association of Geographers Symposium on Spatial AI and Data Science: Frontiers and Applications: Big Data Computing for Geospatial Applications Title: <i>Mapping High Resolution Anthrax Ecologies: Integrating PlanetScope Data and High-Performance Computing for Ecological Niche Models</i>
2025 (Sept.)	TN View Annual Webinar Title: <i>Hog-Spot Analysis: Monitoring the Fiends of the Smokies</i>
2025 (April)	American Society of Photogrammetry and Remote Sensing, Mid-South Oak Ridge National Laboratory Title: <i>High-Resolution Land Cover and Phenological Analysis of Anthrax Outbreak Landscapes in the Texas Anthrax Triangle Leveraging Cloud-Based High-Performance Computing</i>
2025 (March)	American Association of Geographers Disease Ecologies Session Detroit, MI Title: <i>Landscape or Founder Effect: Examining differences in land cover characteristics associated with two distinct lineages of Bacillus anthracis in the Texas Anthrax Triangle</i>
2025 (Jan.)	UTK Geo-Symposium University of Tennessee, Knoxville Title: <i>Narrowly Avoided the Past: Remembering Nathan Bedford Forrest at Parker's Crossroads Battlefield</i>

## **FIELD EXPERIENCE**

---

2025	UAS Imaging of Cataloochee Valley Great Smoky Mountains National Park In support of NSF Grant #2501466 P.I.: Dr. Anna Marshall, UTK
2025	Archeological Aerial Data Collection Heathsville, VA In support of UTK Dept. of Anthropology

## **GUEST LECTURES**

---

- 2025                    Geography 513: Advanced Remote Sensing
- 2025                    Geography 111: Our Digital Earth
- 2025                    Geography 331: Natural Hazards
- 2024                    Geography 413: Remote Sensing of the Environment

## **MEMBERSHIPS**

---

American Society of Photogrammetry and Remote Sensing  
American Association of Geographers  
Southeastern Division of the American Association of Geographers UTK  
UTK DARC Lab, *Managing Member*  
GeogGrads, *Department Events Committee Graduate Representative*