

**DRYVER Z. FINCH**  
dryver.finch@outlook.com

Department of Geography and Sustainability  
University of Tennessee, Knoxville  
Knoxville, TN 37996

---

Geographer specializing in remote sensing applications for land and resource monitoring, conservation, and ecological disease surveillance. My work integrates both satellite- and UAS-based LiDAR and multispectral imaging with machine and deep learning techniques. Passionate about developing Python tools to automate workflows and promote accessibility to advanced analysis, while maintaining reproducibility and transparency.

## **EDUCATION**

---

2026 (August)	Master of Science, Geography University of Tennessee, Knoxville Focus: Remote Sensing and Geospatial Software Engineering Advisor: Dr. Hannah Herrero
2024	Bachelor of Science Geographic Information Science and Technology University of Tennessee, Knoxville <i>Magna cum laude</i>

## **TECHNICAL SKILLS**

---

<b>Languages &amp; Frameworks</b>	Python, R, Java, Docker, Singularity, Cloud computing, High-Performance Computing, Database Management
<b>Tools &amp; Platforms</b>	ArcGIS Pro, QGIS, Git/GitHub, VS Code, Azure, Pix4D, Google Earth Engine, LiDAR/remote sensing processing

## **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
----------------	--

*GEOG 314: Intro to Uncrewed Aerial Systems*

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.)

Education Collaboration at ORNL (ECO) Intern

Geospatial Science and Human Security Division

Mentor: Dr. Matt McCarthy

Supported ongoing narcotics smuggling interdiction research with United States Coast Guard and Department of Homeland Security

2024 (May-Aug.)

Science Undergraduate Laboratory Intern (SULI)

Geospatial Science and Human Security Division

Mentor: Dr. Matt McCarthy

Developed vessel-detection methods using deep learning and computer vision techniques in Python

2023 – 2024

Legal/Executive Assistant

Stephens & DiRado, LLP

Knoxville, TN

Served as main point of contact for the firm; prepared motions, orders, and briefs to be filed in criminal court

2022-2023

Environmental Compliance Intern

Knoxville Utilities Board

Department of Safety and Technical Services

Created site maps of wastewater treatment facilities for annual compliance reports and developed a records-management system for state/federal reporting

2021-2022

Water Systems Engineering Intern

Knoxville Utilities Board

Department of Water Systems Engineering

Digitized and catalogued all new and repaired assets in ArcGIS Enterprise system; created project maps for engineers to present at board meetings

## AWARDS & HONORS

---

2026	ASPRS Mid-South Conference Best Student Presentation
2026	UTK Graduate Student Senate Travel Award
2025	Bruce Ralston Geospatial Achievement Award
2025	TN View Remote Sensing Fellow
2024	University of Tennessee GIS&T Student of Distinction

## PUBLICATION & MANUSCRIPTS

---

Herrero, H. V., Van der Walt, Z. L., Bunting, E. L., Insalaco, S. A., Spining, J. D., Finch, D. Z., Southworth, J., & Blackburn, J. K. (2026). Pathways to Sustainable Land Stewardship in South Africa's Wine-Producing Regions. *Sustainability*, 18(8), 3825. <https://doi.org/10.3390/su18083825>

Finch, D.Z., Herrero, H.V., & Blackburn, J.K.. (in preparation) *plaknit: An open-source Python package for large-scale PlanetScope imagery processing*. Target journal: *Journal of Open-Source Software*

Finch, D.Z., Herrero, H.V., Nthiga, N., Blackburn, J.K.. (in preparation). *A high-resolution remote sensing approach to disease ecologies in the Texas Anthrax Triangle*. Target journal: *Journal of Biogeography*

## CONFERENCE PRESENTATIONS

---

2026 (March 30) American Society of Photogrammetry and Remote Sensing, Mid-South Region  
Oak Ridge National Laboratory, TN  
Title: *Introducing plaknit: An Open-Source Python Software Package for Large-Scale PlanetScope Imagery Processing*

2026 (March 21) American Association of Geographers  
Symposium on Spatial AI and Data Science: Frontiers and Applications: Big Data Computing for Geospatial Applications  
San Francisco, CA  
Title: *Mapping High Resolution Anthrax Ecologies: Integrating PlanetScope Data and High-Performance Computing for Ecological Niche Models*

- 2025 (Sept.)                    TN View Annual Webinar  
 Title: *Hog-Spot Analysis: Monitoring the Fiends of the Smokies with UAS and PlanetScope Imagery*
- 2025 (April)                    American Society of Photogrammetry and Remote Sensing,  
 Mid-South Region  
 Oak Ridge National Laboratory, TN  
 Title: *High-Resolution Land Cover and Phenological Analysis of Anthrax Outbreak Landscapes in the Texas Anthrax Triangle*
- 2025 (March)                    American Association of Geographers  
 Disease Ecologies Session  
 Detroit, MI  
 Title: *Landscape or Founder Effect: Examining differences in land cover characteristics associated with two distinct lineages of Bacillus anthracis in the Texas Anthrax Triangle*

## **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**

---

- 2026 - Spring                    Geography 499: Practicing Geography
- 2026 - Spring                    Geography 132: Landscapes and Environmental Change
- 2025 - Fall                        Geography 513: Advanced Remote Sensing
- 2025 - Spring                    Geography 111: Our Digital Earth
- 2025 - Spring                    Geography 331: Natural Hazards
- 2024 - Fall                        Geography 413: Remote Sensing of the Environment

## **MEMBERSHIPS**

---

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

## **LINKS**

---

Personal Website: <https://dzfinch.github.io/>

LinkedIn: <https://www.linkedin.com/in/dryverfinch/>

GitHub: <https://github.com/dzfinch>

Outreach/articles: [Boots on the Ground, Drones in the Air - College of Arts and Sciences](#)

## **CERTIFICATIONS**

---

FAA PART 107 UAS Remote Pilot (Cert. No. 5217840)