

Jason Haley

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EDUCATION

The Pennsylvania State University, University Park, PA

Expected May 2028

M.S. Geography

Frostburg State University, Frostburg, MD

May 2026

B.S. Geography (Geospatial Science) & B.A. Spanish | Minors: Data Science, Climate Science

GPA: 4.00/4.00 | Departmental Honors in Geography

KEY SKILLS

Software: ArcGIS Pro/Online (Survey123, Dashboards, StoryMaps, Experience Builder), QGIS, ENVI, Unity, Excel

Programming & Data: Python (GeoPandas, NumPy, ArcPy, matplotlib), R, C#, Git/GitHub, Jupyter, VS Code

Languages: Spanish (Fluent - Maryland Seal of Bilingualism), Tagalog (Basic), English (Native)

RELEVANT EXPERIENCE

Geoinformatics & Earth Observation Laboratory (GEOLab), University Park, PA

Aug. 2026 – Present

Graduate Research Assistant

- Extending methods in multi-angle LWIR (Long-Wave Infrared) hyperspectral imagery analysis for surface and material characterization using airborne data from the Nittany Radiance experiment.

Esri, Redlands, CA

May – Aug. 2026

Product Engineering Intern — Raster & Internationalization Teams

- Tested and validated raster and hyperspectral imagery functions across ArcGIS Pro's 18 supported language packs and localized environments to ensure global software functionality.
- Modified Python-based automated tests to strengthen validation of raster functionality across languages and regional settings.
- Led spatial analysis and co-development of GeoPulse – an application that uses 70,000+ records of historical EMS incidents and AI-assisted forecasting to identify high-demand areas and with support ambulance staging.
 - Selected for the Esri Intern Hackathon Finals - presented a live demo to 300+ Esri colleagues nationwide.

Western Maryland Regional GIS Center, Frostburg, MD

Sep. – Dec. 2025; Oct. – Dec. 2023

GIS Intern

- Created a campus-wide utilities ArcGIS Web Map for 35+ buildings at Frostburg State University for use by the Frostburg Fire Department during emergency operations.
- Piloted UAVs (Unmanned Aerial Vehicles) to capture and analyze thermal-infrared imagery for locating hotspots and targeting underground wildfire remediation in White Hall, West Virginia.
- Developed Survey123 forms to digitize 20+ field data-collection workflows for the Abandoned Mine Lands inventory update of the Maryland Department of the Environment.

University of Maryland Center for Environmental Science, Frostburg, MD

May – Aug. 2025

Research Intern — Global Nitrogen Innovation Center for Clean Energy & the Environment (NICCEE)

- Developed an interactive VR tool in Unity using C# and 3-D modeling to simulate on-farm green ammonia production for science education.
- Synthesized 50+ peer-reviewed articles on nitrogen technology and associated environmental impacts.

LEADERSHIP & INVOLVEMENT

Gamma Theta Upsilon, International Geographical Honor Society

2024–2026

Vice President – Gamma Phi Chapter at Frostburg State University

NCAA Division II Men's Tennis, Frostburg State University

2022–2026

No. 3 Doubles, No. 6 Singles Player – Mountain East Conference (MEC) Semi-Finals appearance in 2024