Graduate Research Assistantship (MS/Ph.D.) – Remote Sensing, GIS & GeoAI

Position Title: Graduate Research Assistant – Remote Sensing, GIS & GeoAI
Location: Department of Environment and Society, Utah State University (Logan, Utah, USA)
Supervisor: Dr. Elise Laugier, Principal Investigator
Research Program: UtahView (AmericaView/USGS)
Anticipated Start Date: January 11, 2027 (preferred), or Summer 2027

About the Lab: The Legacy Systems (LEGASYS) Lab, part of the Department of Environment and Society at Utah State University, investigates long-term human-environment interactions and landscape change through remote sensing, geospatial analysis, and environmental archaeology. Our research combines historical imagery, satellite remote sensing, and field-based observations to understand how land-use practices transform landscapes over time. Current research projects are focused on the Kurdistan Region of Iraq and the western United States.

Position Overview: The LEGASYS Lab is seeking a motivated MS or Ph.D. student to join a UtahView-funded research project examining historical land-use and landscape change in Utah. *Preference will be given to candidates available to begin January 11, 2027*, although applicants interested in a Summer 2027 start will also be considered. The successful candidate will work with historical aerial photography, satellite imagery, and other geospatial datasets to investigate patterns of agricultural land use, vegetation change, and landscape transformation. Research activities will involve remote sensing, geospatial programming, and opportunities to apply machine learning and GeoAI methods to image classification, feature extraction, and change detection. This funded research assistantship offers an opportunity to develop an original MS thesis or Ph.D. dissertation within a broader program investigating long-term landscape change, while contributing to ongoing geospatial research and analysis.

Qualifications:

- Bachelor's or Master's degree in Geography, Environmental Science, Anthropology, or a related field.
- Demonstrated proficiency in ArcGIS Pro and experience with Python are required. Experience with QGIS, Google Earth Engine, or open-source geospatial tools is preferred.
- Prior research experience in remote sensing or geospatial analysis is preferred, along with strong analytical, organizational, and communication skills.

Responsibilities:

- Process and analyze historical aerial photography, satellite imagery, and geospatial datasets using remote sensing and GeoAI methods.
- Develop reproducible geospatial workflows, including image classification, change detection, and other spatial analyses.
- Contribute to research publications and presentations while developing an original MS thesis or Ph.D. dissertation.

What You'll Gain:

- Advanced research experience in remote sensing, geospatial analysis, and GeoAI.
- Opportunity to earn USU's Remote Sensing and Geospatial Artificial Intelligence (RS-GeoAI) Certificate through graduate coursework, subject to program requirements.
- Research mentorship, professional development, and opportunities for conference presentations and publications.

Funding and Benefits
This position provides up to four years of graduate assistantship support for Ph.D. students, including two years as a Graduate Research Assistant (GRA) followed by two years as a Graduate Teaching Assistant (GTA), contingent on satisfactory academic performance and progress toward degree completion. Funding includes a stipend, tuition support, and subsidized graduate student health insurance. Funding duration for MS students will be determined according to the degree program and appointment. Additional details regarding compensation and benefits will be provided during the application process.

Application Deadline: December 1, 2026 (open until filled)
For additional information, please contact Dr. Elise Laugier at elise.laugier@usu.edu. Applicants interested in the January 2027 start date are encouraged to contact Dr. Laugier as soon as possible. Formal admission to an appropriate graduate program at Utah State University is required.

Application Process: Interested candidates should contact Elise Laugier (elise.laugier@usu.edu) directly before the application deadline and provide the following:

1. **CV or Resume** – Highlighting academic preparation, technical skills, research experience, and publications or presentations, if applicable.
2. **Statement of Interest (1 page)** – Describing research interests, experience with remote sensing and geospatial programming, potential thesis or dissertation research directions, intended degree (MS or Ph.D.), and preferred start date.
3. **References** – Contact information for two professional or academic references.

Utah State University (USU) is a Carnegie R1 land-grant research university located in Logan, Utah. Founded in 1888, USU enrolls over 29,800 students and is recognized for its research excellence, community engagement, and commitment to student success. The university offers extensive research opportunities, with more than 50 research facilities and the nation's second-oldest undergraduate research program. USU is committed to fostering a supportive and inclusive academic community where diverse perspectives and experiences are valued.

The main campus is located in scenic Cache Valley, approximately 85 miles north of Salt Lake City. Surrounded by mountains, lakes, and rivers, Logan offers a welcoming university community with year-round outdoor recreation, including hiking, skiing, and mountain biking. Learn more about USU and Logan, Utah.

