Opportunity Title: USDA-ARS SCINet/AI-COE Postdoctoral Fellowship in AI Analysis of UAV Imagery for Rangeland Ecology
Opportunity Reference Code: USDA-ARS-SCINet-2026-0370

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-SCINet-2026-0370

How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Click here for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations

All documents must be in English or include an official English translation.

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Application Deadline 11/20/2026 3:00:00 PM Eastern Time Zone

Description **ARS Office/Lab and Location:** A postdoctoral research opportunity is available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Range and Meadow Forage Management Research Unit in Burns, Oregon.

The Agricultural Research Service (ARS) is the U.S. Department of Agriculture's chief scientific in-house research agency with a mission to find solutions to agricultural problems that affect Americans every day from field to table. ARS delivers cutting-edge, scientific tools and innovative solutions for American farmers, producers, industry, and communities to support the nourishment and well-being of all people; sustain our nation's agroecosystems and natural resources; and ensure the economic competitiveness and excellence of our agriculture. The vision of the agency is to provide global leadership in agricultural discoveries through scientific excellence.

ARS's SCINet/Artificial Intelligence (AI) Center of Excellence Research Participation Program offers research opportunities to motivated postdoctoral fellows interested in solving agriculture-related problems at a range of spatial and temporal scales, from the genome to the continent, and sub-daily to evolutionary time scales. One of the goals of the SCINet Initiative is to develop and apply new technologies, including AI and machine learning (ML), to help solve complex agricultural problems that also depend on collaboration across scientific disciplines and geographic locations. In addition, many of these technologies rely on the synthesis, integration, and analysis of large, diverse datasets that benefit from high-performance computing (HPC). The objective of these fellowships is to

facilitate cross-disciplinary, cross-location research through collaborative research on problems of interest to each applicant and amenable to or requiring HPC resources. Training will be provided in data science, scientific computing, AI/ML, and related topics as needed for the fellow to complete their research. Additional funds are available for supplies and travel essential for the fellow's research.

Research Project: Throughout the course of this research project, you will have the opportunity to gain experience in and learn about unoccupied aerial vehicle (UAV) imagery collection and processing, deep learning methods, and rangeland vegetation communities in Oregon and Idaho as part of an interdisciplinary team including researchers in plant ecology, remote sensing, and computer science.

UAV imagery and increasingly sophisticated and targeted AI algorithms can estimate forage quality, biodiversity, and the abundance of individual plant species of interest, like invasives, across broad areas (~1 – 100 ha). Under the guidance of a mentor, you will participate in a project focused on (1) applying and helping to improve upon an existing AI pipeline to classify rangeland plant species, and (2) using transfer learning to adapt deep learning models for imagery analysis to varying UAV sensors and conditions. These techniques will allow you to identify and pursue researching a range of ecological questions related to community ecology, invasive species, pollinator floral resources, restoration, and wildfire burn severity.

Learning Objectives: Under the guidance of a mentor, you will learn about (1) geospatial processing and ML/AI methods and (2) how to contribute to SCINet and the ARS AI Center of Excellence community by developing and publishing workflows and code repositories for open-source software related to UAV imagery processing and ecological community dynamics. You will also have the opportunity to take on-line courses in scientific topics, such as R, Python, and statistics, and to learn collaboration and leadership skills through workshop and group experience.

USDA-ARS Mentor: If you have questions about the nature of the research, please contact Peter Olsoy, peter.olsoy@usda.gov

Anticipated Appointment Start Date: January 2027. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year but may be renewed for a second year upon recommendation of the mentor and ARS.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant(s) will receive a monthly stipend commensurate with educational level and experience. **The current stipend range for this opportunity is $100,000 - $110,000/year plus a supplement to offset health insurance costs.** Funding is also available to

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help offset relocation costs, if applicable.

Citizenship Requirements: This opportunity is available to U.S. citizens only.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and ARS. Participants do not become employees of USDA, ARS, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

Questions: Please visit our Program Website. After reading, if you have additional questions about the application process, please email ORISE.ARS.SCINet@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should be currently pursuing or have received a doctoral degree in the one of the relevant fields.

Preferred skills:

- Strong programming skills in Python or R
- Experience with remote sensing datasets, particularly UAV imagery
- Experience with publishing in peer-reviewed journals
- Strong written and verbal communication skills
- Ability to research both independently under the guidance of a mentor and as part of an interdisciplinary research team

Stipend $100,000.00 – $110,000.00 Yearly

Point of Contact Janeen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (51 👁)
  - **Social and Behavioral Sciences** (1 👁)