



Department of Geography and Environmental Sustainability

The University of Oklahoma®

Postdoc Position on Agricultural Irrigation and Remote Sensing

Summary: The [Agri-Urban Interactions GeoAI Lab](#) at the University of Oklahoma seeks a postdoctoral researcher with expertise in remote sensing and machine learning to advance the characterization of agricultural irrigation practices and estimation of water use. The successful candidate will lead research aimed at mining multi-source geospatial data (e.g., remote sensing, GIS, and field surveys) to create critical irrigation datasets and mapping tools supporting water resource management across Texas. The postdoc will join a dynamic, collaborative, and interdisciplinary team and work closely with collaborators from the University of Texas at Austin and the Texas Water Development Board.

Position responsibilities:

- Develop and implement machine learning approaches to characterize irrigation practices, including locations, technologies, efficiencies, and water use
- Engage with stakeholders to ensure research outputs meet user needs
- Participate in project team meetings and support project reporting activities
- Publish research findings in peer-reviewed journals and prepare technical reports and guidelines
- Present findings at regional and national conferences and workshops
- Perform other duties if necessary (e.g., mentor students; provide support for and/or lead proposal preparation and submission)

Preferred qualifications:

- PhD in geospatial data science, remote sensing, AI/ML, or a related field
- Strong background in remote sensing and AI/ML for large-scale agriculture and/or land use/cover mapping
- Experience with cloud computing resources (e.g., Google Earth Engine) and handling large geospatial datasets
- Familiarity with agricultural, irrigation, water use, and land use.
- Strong oral and written communication skills
- Good record of peer-reviewed publications
- Interest and ability in mentoring students

The Department of Geography and Environmental Sustainability at the University of Oklahoma is a vibrant and continuously evolving department with the mission to conduct innovative and socially relevant research. The city of Norman, OK is recognized as one of the best small cities in the U.S., with modest living costs, easy access to metropolises (e.g., Dallas and Oklahoma City), and an inclusive and welcoming environment. For more information: [The Geography Department](#); [City of Norman, OK](#).

To apply, please provide a PDF containing (1) a cover letter detailing qualifications and interest in this position (2) a current CV, and (3) names and contact information of three professional references to Dr. Yanhua Xie (yanhua.xie@ou.edu). Applications will be reviewed upon submission until the position is filled. The position is available immediately for an initial 2-year appointment, with strong potential for continuation pending performance and funding. The annual salary is \$60,000, plus health insurance benefits.