

Opportunity Title: USDA-ARS Post-Bachelor's Agricultural Engineering Fellowship for AI-Based Approaches for Monitoring Grain Quality
Opportunity Reference Code: USDA-ARS-PA-2026-0319

Organization U.S. Department of Agriculture (USDA)

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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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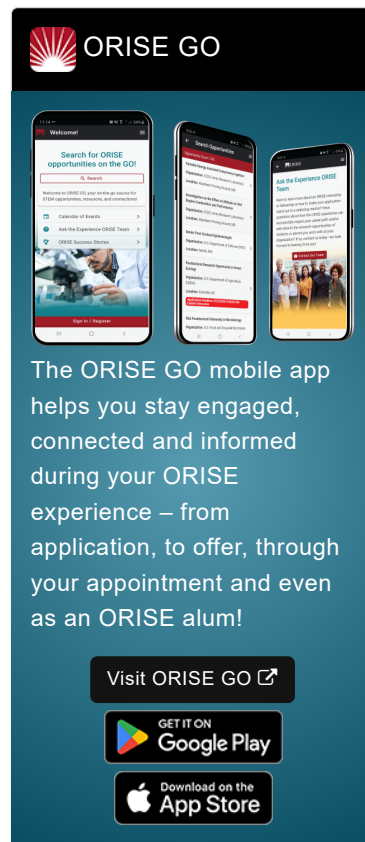
Application Deadline 10/23/2026 3:00:00 PM Eastern Time Zone

Description ***Applications are reviewed on a rolling-basis.**

ARS Office/Lab and Location: A research opportunity is currently available with the U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS).

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 will deliver 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.

Research Project: USDA-ARS in Manhattan, KS is developing affordable remote-sensing tools to rapidly detect insect activity and grain-quality issues in bulk storage and food facilities. You will join and learn from a community of scientists and post-docs in the unit engaged in efforts to integrate and analyze data from volatile-gas sensors, RGB/IR cameras, video systems, insect traps, and other devices to build predictive, AI- and machine-learning based models for monitoring grain quality and detecting deterioration due to mold, insect activity, or physical breakage before problems become widespread and result in significant economic losses.



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This research opportunity includes participating in field deployments in pilot-scale elevators, bins, simulated warehouses, and flour mills; coding and programming to operate and collect data from specialized research equipment; and may involve light fabrication of research materials in our unit's machine shop, as needed.

Learning Objectives: Under the guidance of a mentor, you will:

- Develop an understanding of the principles of remote-sensing technologies used to monitor grain quality and detect insect activity.
- Gain hands-on experience deploying sensors and monitoring equipment in pilot-scale elevators, bins, simulated warehouses, and flour mills.
- Learn to collect, integrate, and analyze data from volatile-gas sensors, RGB/IR cameras, video systems, insect traps, and other monitoring devices.
- Develop skills in coding and programming for operating specialized research equipment and handling large data streams.
- Build foundational knowledge in AI and machine-learning approaches for predictive modeling in grain-quality assessment.
- Learn how deterioration in stored grain develops, including mold growth, insect activity, and physical breakage, and how to detect early warning signals.
- Strengthen problem-solving skills by participating in the development of affordable, field-ready sensing tools.
- Gain experience engaging with scientists, post-doctoral researchers, and technical staff in a multidisciplinary research environment.
- Acquire skills in light fabrication and prototyping of research materials in a machine-shop setting.

Mentor(s): The mentor for this opportunity is Erin Scully (erin.scully@usda.gov).

If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: September 2026. 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 upon recommendation of ARS and is contingent on the availability of funds.

Level of Participation: The appointment is full time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience.

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

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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.Plains@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate is a U.S. Citizen who has obtained a bachelor's degree in one of the relevant fields. Degree must have been received within past 60 months.

Preferred Skills:

- A background in computer and/or data science with some experience in machine learning, multivariate statistical analysis, artificial intelligence, or computer programming.
- Some knowledge or prior experience in agriculture, grain science, engineering, or entomology.

Stipend \$45,000.00 – \$50,460.00 Yearly

Point of Contact [Janeen](#)

Eligibility • **Citizenship:** U.S. Citizen Only

Requirements • **Degree:** Bachelor's Degree received within the last 65 month(s).

• **Discipline(s):**

- **Computer, Information, and Data Sciences** ([4](#)👁)
- **Engineering** ([1](#)👁)

• **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).