Opportunity Title: USDA-ARS Summer Internship in Agricultural and Mechanical Engineering
Opportunity Reference Code: USDA-ARS-NEA-2026-0165

Organization U.S. Department of Agriculture (USDA)

Reference Code USDA-ARS-NEA-2026-0165

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 6/5/2026 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), located in Beltsville, Maryland.

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: The project focuses on the use of drones, robotic dogs, and imaging technologies to identify potential food safety risks in agricultural environments, including animal intrusion and fecal contamination before harvest. Through this project, you will have the opportunity to engage in research activities related to the development of autonomous technologies for preharvest safety inspection of produce fields. You will receive hands on experience in image labeling, field data collection, experiment preparation, and the organization and analysis of large datasets generated from multiple sensing platforms. You may also

collaborate on activities involving image based AI model development, data interpretation, and evaluation of integrated sensing systems for agricultural applications. These projects are intended to provide educational and research training opportunities that complement the participant's academic background while increasing knowledge of imaging, automation, and AI technologies that support the USDA ARS mission in food safety and agricultural innovation.

Learning Objectives: By the end of this experience, the participant will be able to:

- Describe the role of autonomous technologies in preharvest food safety inspection of produce fields.
- Explain how drones, robotic dogs, and imaging systems can be applied to detect food safety risks such as animal intrusion and fecal contamination.
- Conduct field-based data collection using aerial and ground robotic platforms in agricultural environments.
- Perform accurate image labeling and annotation to support supervised machine learning applications.
- Prepare and gain experience through field experiments, including protocol development, equipment setup, and data organization.
- Organize and analyze large, multi-source datasets generated from integrated sensing platforms.
- Contribute to the development and evaluation of image-based AI models for agricultural safety applications.
- Interpret imaging and sensor data to assess system performance and identify potential food safety risks.
- Evaluate the effectiveness of integrated sensing and automation systems for real-world agricultural inspection tasks.
- Integrate knowledge of imaging, automation, and AI technologies to support innovations aligned with the USDA ARS mission in food safety and agricultural advancement.

Mentor(s): The mentor for this opportunity is Insuck Baek (insuck.baek@usda.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: June 1, 2026. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for three months, 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

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

Qualifications Applicants should be currently pursuing a bachelor's degree.

Point of Contact Janeen

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Currently pursuing a Bachelor's Degree.
- **Discipline(s):**
  - **Engineering** (4 👁)