Opportunity Title: Machine Learning Approaches to Canine Identification - Research Fellowship
Opportunity Reference Code: DEVCOM-CBC-2026-0004

Organization U.S. Department of Defense (DOD)

Reference Code DEVCOM-CBC-2026-0004

How to Apply Click on *Apply* at the bottom of the opportunity to start your application.

Description The U.S. Army is offering a graduate research fellowship at the Combat Capabilities Development Command – Chemical Biological Center (DEVCOM-CBC). As a research fellow, you will join a community of scientists to support our mission to conduct innovative research and development to address existing and future defense-related challenges.

What will I be doing?

Scent detection dogs are critical force protection assets, whether they are deterring potential adversaries or detecting hazardous material. Thus, it is important that we are able to identify these dogs in more ways than the current state of practice which involves an externally applied identifier (e.g., a collar with a name tag, an RFID microchip, or a skin tattoo). Ideally, an intrinsic method of canine identification equivalent to a human fingerprint would exist. Throughout this fellowship, you will participate in research projects involving canine biometric data, looking for novel ways to identify and individuate dogs using neural networks, local feature mapping, image classifiers, and a variety of software tools. In addition, research will involve creating databases of photos, derived images, and scans to expand the corpus of the canine repository.

Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. Along the way, you will engage in activities and research in several areas. These include, but are not limited to:

- Applying machine learning algorithms to solve real-world problems.
- Creating and structuring databases for storage, retrieval, and image analysis.
- Determining sensitivity and specificity criteria of algorithms for accurate identifications, taking into account technological limitations and limitations of input data.
- Using and modifying commercial off-the-shelf or open-source computational resources for image analysis.

Where will I be located?

Location varies

What is the anticipated start date?

DEVCOM-CBC is ready to make appointments immediately. Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed on an ongoing basis and fellowships will be filled as qualified candidates are identified.

What is the appointment length?

This appointment is a 12-month research appointment, with the possibility to be renewed for additional research periods. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

What are the provisions?

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You will receive a stipend to be determined by DEVCOM-CBC. Stipends are typically based on a participant's academic standing, discipline, experience, and research facility location. Other provisions may include the following:

- Health Insurance Supplement (*Participants are eligible to purchase health insurance through ORISE)*
- Relocation Allowance
- Training and Travel Allowance

About DEVCOM-CBC

The U.S. Army Combat Capabilities Development Command - Chemical Biological Center (DEVCOM-CBC) is the primary Department of Defense technical organization for non-medical chemical and biological defense. (DEVCOM-CBC) activities at the Edgewood portion of Aberdeen Proving Ground, Maryland, provide an extraordinary capability against emerging biological and chemical threats by merging intelligence assessments with its world-renowned chemistry, biology, physiology and engineering expertise at every stage of the acquisition life cycle. We provide a unique blend of distinguished scientists and engineers for the research and development of innovative technological solutions to solve chemical and biological defense threats to our nation—both abroad and on the homeland.

About ORISE

This program, administered by Oak Ridge Associated Universities (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 DoD. Participants do not enter an employee/employer relationship with ORISE, ORAU, DoD or any other office or agency. Instead, you will be affiliated with ORISE for the administration of the appointment through the ORISE appointment letter and Terms of Appointment. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE. For more information, visit the ORISE Research Participation Program at the U.S. Department of Defense.

Qualifications

The qualified candidate will have earned a master's or doctoral degree in a discipline directly related to the described research within 60 months of appointment start date or are currently pursuing with an anticipated completion date before June 26, 2026. The candidate must also have B.A, or B.S., in a life science, engineering, mathematics, or a discipline directly related to the described research.

Highly competitive applicants will have prior hands-on laboratory or prior relevant experience.

Candidates must pass a background check in order to access U.S. Army facilities.

Application Requirements

A complete application consists of:

- Zintellect Profile
- Educational and Employment History
- Essay Questions (goals, experiences, and skills relevant to the opportunity)
- Resume (PDF)
- Transcripts/Academic Records - Please upload a copy of a transcript for your current or most

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recent degree program that meets the disciplinary qualifications of the opportunity. Click here for detailed information about acceptable transcripts.

- One Recommendation. We encourage you to contact your recommender as soon as you start your application to ensure they are able to complete the recommendation form and to let them know to expect a message from Zintellect. Recommenders will be asked to rate your scientific capabilities, personal characteristics, and describe how they know you. You can always log back in to your Zintellect account and check the status of your application.

If you have questions, send an email to ARMY-RDECOM@orise.orau.gov. Please list the reference code of this opportunity DEVCOM-CBC-2026-0004 in the subject line of the email. Please understand that ORISE does not review applications or select applicants; selections are made by the sponsoring agency identified on this opportunity. All application materials should be submitted via the "Apply" button at the bottom of this opportunity listing. Please do not send application materials to the email address above.

Connect with ORISE...on the GO! Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

Stipend $80,000.00 – $125,000.00 Yearly

Point of Contact Richard

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 6/26/2026 12:00:00 AM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12)
  - **Communications and Graphics Design** (2)
  - **Computer, Information, and Data Sciences** (17)
  - **Earth and Geosciences** (21)
  - **Engineering** (29)
  - **Environmental and Marine Sciences** (14)
  - **Life Health and Medical Sciences** (51)
  - **Mathematics and Statistics** (11)
  - **Physics** (16)
  - **Science & Engineering-related** (2)
  - **Social and Behavioral Sciences** (29)