

Opportunity Title: Software Development: U.S. Naval Research Laboratory

Summer Internship

Opportunity Reference Code: ERDC-ITL-2023-0026

Organization U.S. Department of Defense (DOD)

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How to Apply Click on *Apply* now to start your application.

Description The U.S. Naval Research Laboratory is a scientific and technical engineering command that conducts basic and applied research for the U.S. Navy and Marine Corps.

Project: Developing improvements to LightDA, a parallel data assimilation system. LightDA is designed to be general purpose, but is primarily intended to support data assimilation for space weather models. The improvements developed under this project would make LightDA more adaptable and easier to use, enabling it to more easily accommodate new models and datasets.

What will I be doing?

Under the guidance of a mentor, you will engage in software development activities to implement the runtime configuration system for LightDA. This will require developing a design for APIs and file formats required for the system, followed by code development to implement the design. In doing so, you will gain experience with HPC systems and software environments, including developing and testing code to support multiple C/C++ and Fortran compilers for portability across HPC systems, developing and testing parallel code using MPI, and working with the queue manager. These skills will benefit you when pursuing a career involving software development in general, and for a career in developing parallel software for HPC systems in particular.

Why should I apply?

This fellowship provides the opportunity to independently utilize your skills and engage with experts in innovative ideas to move the proposed research forward.

Where will I be located? Washington, DC

What is the anticipated start date?

June 2023 - Exact start dates will be determined at the time of selection and in coordination with the selected candidate.

What is the appointment length?


This appointment is a summer research appointment. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

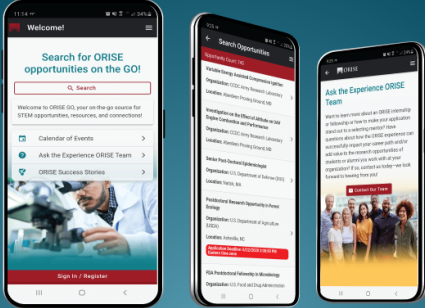
What are the benefits?

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

- Health Insurance Supplement (*Participants are eligible to purchase health*






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insurance through ORISE)

- Relocation Allowance
- Training and Travel Allowance

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 into 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 candidate should have computer programming skills with experience with C/C++, Fortran, object-oriented programming, or parallel computing using MPI would be a plus. Education in computer science, physics, meteorology, or mathematics would be a plus.

Security Investigation: Applicants should be able to pass a National Agency Check and Inquiries (NACI) security investigation should they be selected and accept the internship offer.

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 - For this opportunity, an official 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](#).
- One recommendation. Your application will be considered incomplete and will not be reviewed until one recommendation is submitted. We encourage you to contact your recommender(s) 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 USACE@orise.orau.gov. Please list the reference code of this opportunity 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.

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Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** High School Diploma/GED, Associate's Degree, Bachelor's Degree, or Master's Degree received within the last 60 months or currently pursuing.
- **Overall GPA:** 3.00
- **Academic Level(s):** Graduate Students, K-12 Students, Post-Associate's, Post-Bachelor's, Postdoctoral, Post-Master's, or Undergraduate Students.
- **Discipline(s):**
 - **Computer, Information, and Data Sciences** (17 )
 - **Earth and Geosciences** (21 )
 - **Engineering** (27 )
 - **Mathematics and Statistics** (11 )
 - **Physics** (16 )
- **Age:** Must be 18 years of age
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).