Opportunity Title: Fellowship in Computer Vision
Opportunity Reference Code: NGA-2021-0024

Organization	U.S. Department of Defense (DOD)
Reference Code	NGA-2021-0024
How to Apply	Click on *Apply* at the bottom of the opportunity to start your application.
Description	The Department of Defense (DoD) is offering a postdoctoral fellowship for their Visiting Scientist Program at the National Geospatial-Intelligence Agency (NGA), a world leader in timely, relevant, accurate and actionable GEOINT.

What will I be doing?

NGA's Research Directorate, Predictive Analysis Team, encompasses techniques from data mining, predictive modeling, and machine learning that analyze current and historical facts to make predictions about future or other unknown events. Sometimes the event is in the future, but predictive analytics can be applied to any time of unknown – past, present or future.

Under the guidance of a mentor, you will conduct applied research in the area of computer vision, satellite image processing and analysis, and geospatial data visualization. The overall objectives for this research are to develop new software scripts and tools that provide rapid analysis of agriculture and land use, apply machine learning and deep learning to identify agricultural fields, and analyze times series of vegetation indices. Emphasis will be placed on cloud computing infrastructure, machine learning algorithms, deep learning frameworks, and testing and validation procedures. The prospective candidate will be a member of an experienced team responsible for developing new methods and carrying out research on small-holder agriculture as it relates to human and environmental security.

Where will I be located?

Springfield, Virginia

What is the anticipated start date?

NGA 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?

Appointments are initially for one year with the option to extend the appointment for up to four additional years, contingent upon project needs and funding availability.

What are the benefits?

As a participant with NGA, you will receive:

- Stipend, determined by NGA, based on your academic credentials and commensurate with GS Locality Pay Tables
- Health Insurance Allowance
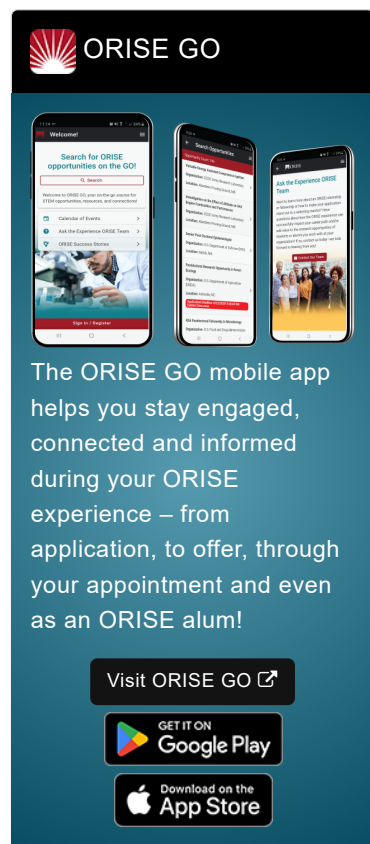
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- Relocation Allowance, if you are located more than 50 miles one way from the hosting facility
- Travel Expense Allowance
- Education and Research Support Allowance

Security Clearance

You must have or be eligible to obtain and maintain a security clearance for the duration of your appointment. It is expected that after completing the necessary application for clearance a fitness determination will allow participation to begin with unclassified material, while awaiting a clearance.

About NGA

The National Geospatial-Intelligence Agency (NGA) delivers world-class geospatial intelligence that provides a decisive advantage to policymakers, warfighters, intelligence professionals, and first responders. Anyone who sails a U.S. ship, flies a U.S. aircraft, makes national policy decisions, fights wars, locates, target, responds to natural disasters, or even navigates with a cellphone relies on NGA. NGA enables all of these critical actions and shapes decisions that impact our world through the indispensable discipline of geospatial intelligence. For more information about NGA, please visit https://www.nga.mil/.

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.

Key Words

Crop studies, Artificial Intelligence / Machine Learning, Environmental Security, Satellite Image Processing, Algorithm Development, Agricultural Monitoring, Data Science, Predictive Analysis

Qualifications The qualified candidate will have a PhD by the start of appointment in one of the following fields: computer science, geography, natural resource management, mathematics, statistics, data science, environmental science, remote sensing, physics, biology, ecology, or a related field. Degree must have been received within five years of the appointment start date. U.S. military veterans who have been honorably discharged (or who have been medically discharged because of a service-connected disability) and who received a doctoral degree within ten years of the desired start date are also eligible.

Highly competitive applicants will have education and/or experience in one

or more of the following:

- Deep Learning
- Convolutional Neural Networks
- Data Science
- Land Systems Science
- Time Series Analysis
- Best Practices in Geo-visualization
- Image Processing
- Image Analysis
- Computer Vision
- Geographic Information Systems
- Remote Sensing
- Cloud Computing
- Google Earth Engine

U.S. citizenship is required.

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 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.
- 2 Recommendation(s)

Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system. All documents must be in English or include an official English translation.

If you have questions, send an email to **ORISEDOD@.orise.orau.gov**. Please list the reference code of this opportunity [NGA-2021-0024] in the subject line of the email.

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!

Eligibility Requirements	- **Citizenship:** U.S. Citizen Only
	- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
	- **Discipline(s):**

- - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (2 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (46 👁)
  - **Mathematics and Statistics** (10 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (1 👁)
  - **Social and Behavioral Sciences** (28 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).