

**Opportunity Title:** Post-Master's Fellowship in Natural Language Processing

**Opportunity Reference Code:** NGA-2021-0023

**Organization** U.S. Department of Defense (DOD)

**Reference Code** NGA-2021-0023

**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 post-master's fellowship at the National Geospatial-Intelligence Agency (NGA), a world leader in timely, relevant, accurate and actionable GEOINT.

**What will I be doing?**

Scientists in NGA Research Directorate's Predictive Analytics Pod (PA) lead research in data mining, machine learning and predictive modeling to identify patterns in historic data and make informed predictions about future events. The candidate selected for this position will apply their technical skills and expertise to develop natural language processing (NLP) techniques for event detection and sentiment analysis.

**Where will I be located?**

Springfield, Virginia, or St. Louis, Missouri

**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 the selected candidate, you will receive:

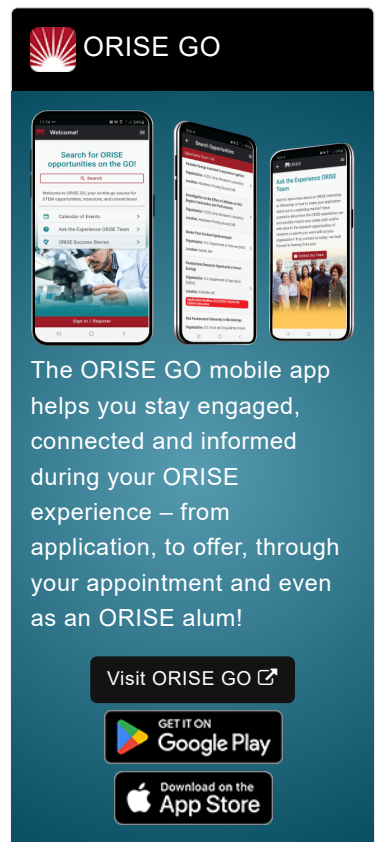
- Stipend payments, determined by NGA, based on your academic credentials and commensurate with GS Locality Pay Tables
- Health Insurance Allowance
- Relocation Allowance, if you are located more than 50 miles one way from the hosting facility
- Travel Expense Allowance
- Education and Research Support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



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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**

Social Network Analysis, Cultural Geography, Human Geography, Data Mining, Data Science, Social Psychology, Artificial Intelligence, Machine Learning, Natural Language Processing, Predictive Analysis, Algorithm Development, Satellite Image Processing, GIS, Cloud Data Analytics, Data Fusion, Object Modeling, Multi-dimensional Data Warehouse, Query Language, Data Visualization Techniques

**Qualifications** The qualified candidate will have received a master's degree. 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 have received a master's degree within ten years of the appointment start-date are also eligible.

Qualified candidates will demonstrate:

- Proficiency in the Python programming language;
- Familiarity with Natural Language Processing (NLP) techniques (e.g. transformer networks, graph embeddings);
- Familiarity with the standard libraries for deep-learning NLP (Keras, PyTorch, and Tensorflow);

In addition to the above indicated qualifications, the following qualifications are highly desirable:

- Familiarity with Social Network Analysis (SNA) and machine learning using neural networks;
- Foreign language competence and cultural expertise;
- Experience with geospatial analytic techniques is a plus.

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

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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 (blacked 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](mailto:ORISEDOD@orise.orau.gov). Please list the reference code of this opportunity (NGA-2021-0023) in the subject line of the email.

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- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
  - **Degree:** Master's Degree received within the last 60 month(s).
  - **Academic Level(s):** Post-Master's.
  - **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).