

Opportunity Title: Unsupervised Labeling of Imagery Fellowship

Opportunity Reference Code: ICPD-2024-19

Organization Office of the Director of National Intelligence (ODNI)

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How to Apply **Create and release your Profile on Zintellect** – Postdoctoral applicants must create an account and complete a profile in the on-line application system. **Please note: your resume/CV may not exceed 3 pages.**

Complete your application – Enter the rest of the information required for the IC Postdoc Program Research Opportunity. The application itself contains detailed instructions for each one of these components: availability, citizenship, transcripts, dissertation abstract, publication and presentation plan, and information about your Research Advisor co-applicant.

Additional information about the IC Postdoctoral Research Fellowship Program is available on the program website located at: <https://orise.orau.gov/icpostdoc/index.html>.

If you have questions, send an email to ICPostdoc@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline 2/28/2024 6:00:00 PM Eastern Time Zone

Description **Research Topic Description, including Problem Statement:**

Modern imagery-based intelligence collectors produce an enormous amount of data, which is simply not possible for a human to review in a timely manner. Effective use of machine learning or artificial intelligence algorithms can meet the timeliness requirements of intelligence products but requires truth in the form of labeled data in order to train networks to detect, classify, and/or identify objects of interest. In the classified domain, labeled data is typically produced via either expensive and logistically complicated coordinated ground truth campaigns, or a tedious and error prone manual process. The challenge for the IC is to develop methodologies for unsupervised learning and labeling of large imagery databases that can be transferred from unclassified systems to classified ones.

Example Approaches:

The use of surrogate algorithms to establish relative truth sets with minimal human intervention is one potential approach. Novel concepts, such as techniques to transfer robustly trained models between domains while maintaining performance would also be considered.

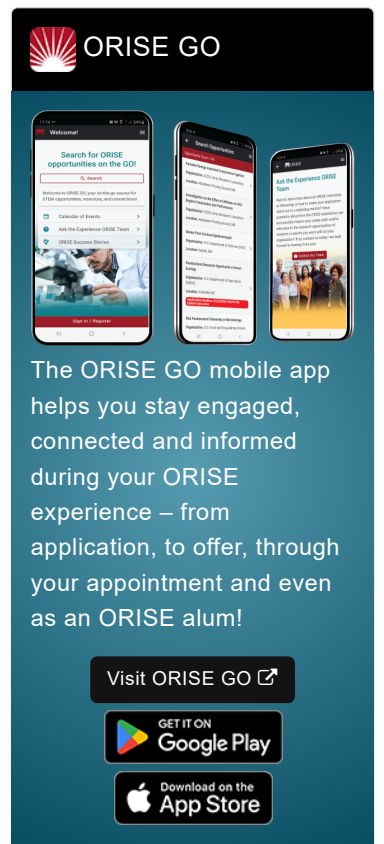
Relevance to the Intelligence Community:

- Create the Future Operational Landscape
- Artificial Intelligence, Computing, Data, Sensors, Space

Key Words: Labeling, Machine Learning, Artificial Intelligence, Training, Computing, Data, Sensors, Space


Qualifications **Postdoc Eligibility**


- U.S. citizens only




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- Ph.D. in a relevant field must be completed before beginning the appointment and within five years of the appointment start date
- Proposal must be associated with an accredited U.S. university, college, or U.S. government laboratory
- Eligible candidates may only receive one award from the IC Postdoctoral Research Fellowship Program

Research Advisor Eligibility

- Must be an employee of an accredited U.S. university, college or U.S. government laboratory
- Are not required to be U.S. citizens

**Eligibility
Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#))
 - **Communications and Graphics Design** ([4](#))
 - **Computer, Information, and Data Sciences** ([16](#))
 - **Earth and Geosciences** ([21](#))
 - **Engineering** ([27](#))
 - **Environmental and Marine Sciences** ([14](#))
 - **Life Health and Medical Sciences** ([45](#))
 - **Mathematics and Statistics** ([11](#))
 - **Other Non-Science & Engineering** ([2](#))
 - **Physics** ([16](#))
 - **Science & Engineering-related** ([1](#))
 - **Social and Behavioral Sciences** ([30](#))