

Opportunity Title: Sentimental Mapping and Perceptions During Times of Peace and War **Opportunity Reference Code:** ICPD-2025-59

Organization Office of the Director of National Intelligence (ODNI)

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

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

Application Deadline 2/28/2025 6:00:00 PM Eastern Time Zone

Description Research Topic Description, including Problem Statement:

Center for Geographic Analysis at Harvard University maintains a Geotweet Archive, a global record of tweets spanning time, geography, and language. The archive consists of about 10 billion tweets from 2010 to the present and is updated hourly. Access to geo-coded social media information offers a unique medium to explore multiple behavioral responses of individuals to changes in their natural or political environment during times of peace and war. This project aims to utilize Geotweet data for semantic and sentiment analysis to forecast and better understand the perception of people using areas of conflict and strategic importance. The specific case study this data can be applied to is on belt and road initiatives in north and east Africa to better understand the true perception and impact. The second case study will examine the foreign meddling and fragmentation that fuels the war in Sudan

Example Approaches:

Previously published works include a four-step methodology to collect, analyze, and map social media sentiment at fine granularity across large areas. This process, called Sentiment Localization and Mapping, allows decision-makers to track local perceptions and tailor operations accordingly. Ref. https://www.jstor.org/stable/27168733 This proposal will continue this work using NLP, LLM, and neural network architectures.

Linkage to current DNI's S&T Priorities:

https://www.dni.gov/files/ODNI/documents/in-step/FY2022-2026_ODNI_ST_Strategic_Plan.pdf **OAK RIDGE INSTITUTE** FOR SCIENCE AND EDUCATION

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Key Words: Geotweet; geo-coded social media information; semantic and



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sentiment analysis; perception of people

Qualifications Postdoc Eligibility

- U.S. citizens only
- 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

• Citizenship: U.S. Citizen Only

Point of Contact Keri

- Eligibility
- **Requirements Degree:** Doctoral Degree.
 - Discipline(s):
 - Chemistry and Materials Sciences (12.)
 - Communications and Graphics Design (<u>3</u>)
 - Computer, Information, and Data Sciences (17. (1)
 - Earth and Geosciences (21 (1)
 - Engineering (27.)
 - Environmental and Marine Sciences (14 (14)
 - Life Health and Medical Sciences (45)
 - Mathematics and Statistics (11 (1)
 - Other Non-Science & Engineering (2.)
 - Physics (<u>16</u> [●])
 - Science & Engineering-related (1.)
 - Social and Behavioral Sciences (30 (10)