Opportunity Title: Evidence-Based Practice: Understanding People Through AI and Big Data

Opportunity Reference Code: ICPD-2025-29

Organization	Office of the Director of National Intelligence (ODNI)
Reference Code	ICPD-2025-29
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	2/28/2025 6:00:00 PM Eastern Time Zone
Description	**Research Topic Description, including Problem Statement:**

People live a significant portion of their lives online, and there is an opportunity to have a greater understanding of online audiences through the advent of AI and big data. By understanding online audiences, this provides greater insights into how people are influenced and how behavior change occurs. These behaviors are influenced by psychological and personality factors. Following the Cambridge Analytica scandal and the associated moral and ethical issues around data collection, much of the research into online personality assessment and understanding online audiences was stunted. However, in the current geopolitical climate and the risks posed by online foreign influence, being able to leverage big data to understand the risks inherent in populations regarding a vulnerability to influence, how and why behavior change occurs, and how populations can be protected is essential within the intelligence community (IC).

There are various tools that are available through industry partners that claim to be able to apply personality theory and modelling to big data to provide an accurate and valid assessment of an individual or an online audience. The IC needs to invest in understanding the evidence behind how to use online data to assess psychological factors and personality for individuals and groups. We need to be able to use big data to collect and analyze information to understand and protect online audiences from malign influence. There are two aspects to this project. The first is understanding how we can validly and reliably apply personality and psychological theory in the online space to better understand the online influence problem posed by foreign adversaries. The second aspect of this proposal is to use this evidence-base to create an AI model that can assess personality and psychological factors through big data.

Example Approaches:

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Research proposals could approach this from psychology, human-centered computer science, data science, social sciences, socio-cultural, or a cross disciplinary effort. Proposals could include:

- Understanding the validity of existing personality models to the online environment
- The use of AI to assess the personality and psychology of individuals and groups
- Using AI to measure psychological factors or personality as relevant to behavior change in the online environment
- Using AI to predict behavior change in the online environment
- Developing an AI model that can be used across languages to assess personality and/or psychological features
- Using an AI model to understand different influences across cultures.

Relevance to the Intelligence Community:

Online material, and the vast quantity available, is a great source of information that can inform actions within the IC. A qualitative assessment of such information is often not possible due to the large quantity of information available. The IC needs to leverage technological advancements to help understand the potential utility in big data, particularly when it comes to understanding foreign influence and protecting the Australian public. Improving the IC's ability to understanding the human aspects of data in a valid and reliable way using AI.

capabilities will significantly enhance the utility of the data available. Further, understanding the science behind applying personality modelling and psychological insights into online information will ensure that the IC is able to make science-driven decisions about methods of analysis. Developing this capability, based on evidence-based practices, will significantly enhance the IC's human science capability.

References:

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Key Words: Personality assessment, online personality, AI, personality models, cyberpsychology.

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

Point of Contact Keri Tarwater

Eligibility Requirements
- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**

- Chemistry and Materials Sciences (12 👁)
- Communications and Graphics Design (3 👁)
- Computer, Information, and Data Sciences (17 👁)
- 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 👁)