

# **Opportunity Title:** Fatigue Management - Cognitive Neuroscience Applied Research Internship

Opportunity Reference Code: AFRL-711HPW-2025-0003

Organization U.S. Department of Defense (DOD)

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- How to Apply Click on Apply at the bottom of the opportunity to start your application.
  - **Description** The Air Force Research Laboratory is offering a full-time research internship at the 711th Human Performance Wing (711 HPW), headquartered at Wright-Patterson Air Force Base in Dayton, Ohio.

### What will I be doing?

As an Oak Ridge Institute for Science and Education (ORISE) participant, you will join a community of scientists and researchers developing interactive, Large Language Model (LLM) / Natural Language Processing (NLP) Agents to guide human performance optimization; for example for fatigue management guidance tailored to the individual. This capability may help shift workers adjust to schedule transitions and prepare for readiness during operational tasks. The team is further exploring novel AI method developments, including applied mathematical and machine learning solutions for real-time use.

#### Why should I apply?

Under the guidance of a mentor, you will gain hands-on experience to complement your education and support your academic and professional goals. Along the way, you will engage in activities and research in several areas. These include, but are not limited to:

- State-of-the-art methods and predictive modeling approaches and ML/AI to complex, high-risk
  questions in human performance data
- Statistical learning models to analyze questions from psychometric, neuroscientific, and human performance data
- Applied research with natural language processing and GPT/LLM AI Agents
- Applied research for AI/ML-assisted medical decision making
- Document analytics pipelines and statistical results, including detailed internal reports for research sponsors and government partners
- Journal articles, conference presentations, git repos, and other public documentation of scientific results and findings

#### Where will I be located?

Dayton, Ohio

#### What is the anticipated start date?

The desired start date is June 16, 2025. 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 internships will be filled as qualified candidates are identified.

#### What is the appointment length?

This appointment is a twelve-month research appointment, with the possibility to be renewed for additional research periods. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant.

### **OAK RIDGE INSTITUTE** FOR SCIENCE AND EDUCATION

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#### What are the provisions?

You will receive a stipend to be determined by AFRL. Stipends are typically based on a participant's academic standing, discipline, experience, and research facility location. Other provisions may include the following:

- Health Insurance Supplement (Participants are eligible to purchase health insurance through ORISE)
- Relocation Allowance
- Training and Travel Allowance

#### About AFRL

The 711th Human Performance Wing (711 HPW), headquartered at Wright-Patterson Air Force Base in Ohio, is the first human-centric warfare wing to consolidate human performance research, education, and consultation under a single organization. Established under the Air Force Research Laboratory (AFRL), the 711 HPW is comprised of the Airman Systems Directorate (RH) and the United States Air Force School of Aerospace Medicine (USAFSAM). For more information about the Air Force Research Laboratory, 711 Human Performance Wing, Airman Systems Directorate, Airman Biosciences Division, please visit https://afresearchlab.com/.

#### 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 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.

Qualifications The qualified candidate will have a BS/BA, master's, or doctoral degree in a STEM related field or will have completed by December 31, 2025. Degree must have been received within 36 months of the appointment start date.

> Highly competitive applicants will have education and/or experience in one or more of the following:

- language processing
- model development
- machine learning
- · algorithm training

#### **Application Requirements**

A complete application consists of:

- Zintellect Profile
- · Educational and Employment History
- · Essay Questions (goals, experiences, and skills relevant to the opportunity)



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- Resume (PDF)
- Transcripts/Academic Records Please upload a copy of a transcript for your current or most recent degree program that meets the disciplinary qualifications of the opportunity. Click here for detailed information about acceptable transcripts.
- One Recommendation. We encourage you to contact your recommender(s) as soon as you start your application to ensure they are able to complete the recommendation form and to let them know to expect a message from Zintellect. Recommenders will be asked to rate your scientific capabilities, personal characteristics, and describe how they know you. You can always log back in to your Zintellect account and check the status of your application.

If you have questions, send an email to airforce@orise.orau.gov. Please list the reference code of this opportunity AFRL-711HPW-2025-0003 in the subject line of the email. Please understand that ORISE does not review applications or select applicants; selections are made by the sponsoring agency identified on this opportunity. All application materials should be submitted via the "Apply" button at the bottom of this opportunity listing. Please do not send application materials to the email address above.

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!

#### Point of Contact Alecia

- Eligibility
- Citizenship: U.S. Citizen Only
- Requirements
- Degree: Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 36 months or anticipated to be received by 12/31/2025 12:00:00 AM.
- Discipline(s):
  - Computer, Information, and Data Sciences (<u>17</u>)
  - Engineering (27 (27)
  - Life Health and Medical Sciences (51.)
  - Mathematics and Statistics (11 (1)
  - Social and Behavioral Sciences (29 •)