

Opportunity Title: Multi-Modal Data Analytics

Opportunity Reference Code: ARL-R-CISD-300055-SIS

Organization DEVCOM Army Research Laboratory

Reference Code ARL-R-CISD-300055-SIS

Description About the Research

The focus of the student internship is on machine learning for multi-modal data analytics. The student will participate in the research and development of machine learning algorithms for multi-modal image and signal processing for enhancing surveillance capabilities. The student will contribute to one or more of the following areas of research: detection/localization, segmentation, robust representation, fusion, and classification. The student will assist with data collections, data processing, and algorithm research (theory and application). The student's contributions should be publishable in technical conferences and journals. Students that have experience with MATLAB, Python, C++, OpenCV, and TensorFlow are preferred.

Keywords: Analytics, Machine Learning, Research & Development

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About Science of Intelligence Systems (SIS)

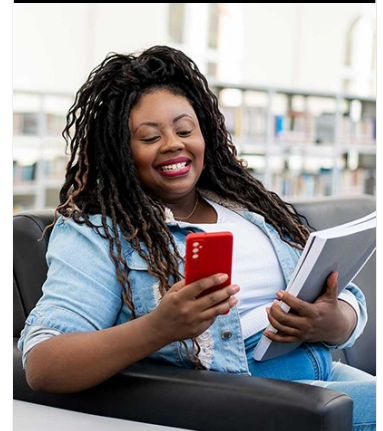
Explores foundational concepts and builds cumulative capabilities to simultaneously address multiple axes of complexity for future Robotics and Autonomous Systems (RAS) operational concepts.

About Army Research Directorate (ARD)

ARL's Army Research Directorate (ARD) focuses on exploiting concept development, discovery, technology development, and transition of the most promising disruptive science and technology to deliver to the Army fundamentally advantageous science-based capabilities through laboratory's 11 research competencies. This intramural research directorate also manages the laboratory's essential research programs, which are flagship research efforts focused on delivering defined outcomes.

About ARL-RAP

The [Army Research Laboratory Research Associateship Program](#) (ARL-RAP) is designed to significantly increase the involvement of creative and highly trained scientists and engineers from academia and industry in scientific and technical areas of interest and relevance to the Army. Scientists and Engineers at the CCDC Army Research Laboratory (ARL) help shape and execute the Army's program for meeting the challenge of developing technologies that will support Army forces in meeting future operational needs by pursuing scientific research and technological developments in diverse fields such as: applied mathematics, atmospheric characterization, simulation and human modeling, digital/optical signal



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processing, nanotechnology, material science and technology, multifunctional technology, combustion processes, propulsion and flight physics, communication and networking, and computational and information sciences.

A complete application includes:

- **Curriculum Vitae or Resume**
- **Three References Forms**
 - An email with a link to the reference form will be available in Zintellect to the applicant upon completion of the on-line application. Please send this email to persons you have selected to complete a reference.
 - References should be from persons familiar with your educational and professional qualifications (include your thesis or dissertation advisor, if applicable)
- **Transcripts**
 - Transcript verifying receipt of degree must be submitted with the application. Student/unofficial copy is acceptable

If selected by an advisor the participant will also be required to write a **research proposal** to submit to the ARL-RAP review panel for :



- Research topic should relate to a specific opportunity at ARL
- The objective of the research topic should be clear and have a defined outcome
- Explain the direction you plan to pursue
- Include expected period for completing the study
- Include a brief background such as preparation and motivation for the research
- References of published efforts may be used to improve the proposal

A link to upload the proposal will be provided to the applicant once the advisor has made their selection.

Questions about this opportunity? Please email

ARLFellowship@orau.org

Point of Contact [ARL](#)

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| Eligibility Requirements | <ul style="list-style-type: none">• Degree: Master's Degree or Doctoral Degree.• Academic Level(s): Any academic level.• Discipline(s):<ul style="list-style-type: none">◦ Computer, Information, and Data Sciences (4 )◦ Engineering (1 ) |
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