

Opportunity Title: Machine Learning for Autonomous Agents

Opportunity Reference Code: ARL-R-CISD-300105

Organization DEVCOM Army Research Laboratory

Reference Code ARL-R-CISD-300105

Description About the Research

Research focuses on the development of computational methods that can be used both to build fully-autonomous artificial agents and also to allow these agents to successfully adapt to new tasks and environments. In particular, this opportunity emphasizes methods that allow artificial agents to learn both from their own experience (e.g., reinforcement learning), and also from human interaction (e.g., imitation learning). Example applications of interest include autonomous vehicle navigation and multi-agent command and control.

Keywords: artificial intelligence, machine learning, reinforcement learning, imitation learning, robotics, control, autonomous agents

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About CISD

The Computational and Information Sciences Directorate (CISD) conducts research in a variety of disciplines relevant to achieving and implementing the so-called digital battlefield. Problems address the sensing, distribution, analysis, and display of information in the modern battle space. CISD research focuses on four major areas: communications, atmospheric modeling, battlefield visualization, and computing


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 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





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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 (see [Research Areas](#))
- 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 Fellowship](#)

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| Eligibility Requirements | <ul style="list-style-type: none">• Degree: Bachelor's 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 (3 )◦ Engineering (4 )◦ Mathematics and Statistics (1 )◦ Physics (1 )◦ Social and Behavioral Sciences (2 )• Age: Must be 18 years of age |
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