



## **ANALYTICS, MODELING, & SIMULATION SCIENTIST/ENGINEER: ARTIFICIAL INTELLIGENCE Boston • DC • Dayton**

**NOTE: Preference will be given to those candidates who can be located in Aptima's DC or Dayton office locations.**

Aptima, Inc. is a fast-paced, employee-focused small business that specializes in finding solutions to complex problems in human-centered engineering. We currently have openings for passionate, creative scientists/engineers of all levels of experience who specialize in artificial intelligence, robotics and/or cognitive modeling. The ideal candidate will possess strong skills in problem analysis, model building, mathematical formulation, algorithm development, and model implementation and analysis.

Technical responsibilities include designing, developing and enhancing modeling algorithms, implementing them in software, and applying them in analyses. The position entails substantial collaboration with software engineering staff to develop model-based decision support software. Additional responsibilities include proposal writing, project management, and customer interaction.

Minimum Requirements:

- Ph.D. or Masters degree in artificial intelligence, computer science, cognitive science, or a related discipline. Suitable applicants may range from recent Masters graduates through established mid-career professionals; qualifications, responsibilities, and compensation will be commensurate with experience.
- Experience developing and implementing intelligent agent or quantitative cognitive models, socio-cultural models, or mixed-initiative AI planning and/or decision support systems. The candidate must have understanding of the underlying theories and experience developing solutions using at least one advanced modeling approach, such as the following:
  - Multiagent Teams and Coordination, Human-Multiagent Systems
  - Neural Networks, Hierarchical Temporal Memory models
  - Bayesian decision theory; Likelihood, Bayesian, posterior parameter estimation
  - Observable and Partially Observable Markov Decision Processes with policy and value function approximations; Hidden Markov Models
  - ACT-R, SOAR and other cognitive models
  - Robotics and Human Robot Interaction
  - Social Network Analysis and Network Theory
  - Mixed-initiative planning and/or decision-support systems
- Experience implementing complex algorithms and models in C++, C#, or Java
- Journal and/or other refereed publications
- Experience writing technical reports and/or proposals
- U.S. Citizenship
- Must be able to obtain Secret security clearance

The ideal candidate will also possess one or more of the following:

- Experience with popular software agent architectures (e.g., JADE, JACK)
- Experience with robots and sensors, simulation environments (e.g. Player/Stage, ROS)
- Experience with standard SNA or MAS packages (e.g., UCINET, RePast)
- Knowledge of basic software engineering design methods and data modeling standards
- Software engineering experience or experience collaborating with a software engineering team
- Experience in project management, business development, and/or proposal writing

Aptima will compensate applicants for any travel or relocation expenses to fill this position. All applicants must be willing to work onsite in one of Aptima's office locations, Monday through Friday (no telecommuting or compressed schedules). Qualified candidates should submit a cover letter, resume/vita, and publications list to [aptima\\_personnel@aptima.com](mailto:aptima_personnel@aptima.com).

All applicants selected will be subject to a government security investigation and must meet eligibility requirements for access to classified information.

**EQUAL OPPORTUNITY EMPLOYER M/F, VETS/DISABLED**