



ANALYTICS, MODELING, & SIMULATION INTERN **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 interns in the Analytics, Modeling and Simulation Division to work with teams that employ computational methods to maximize organizational effectiveness, identify patterns in noisy data, manage coordination within teams of humans and agents/robots, and understand organizational, cultural, and social behavior. The ideal candidate will possess strong skills in problem analysis, mathematical model formulation, advanced algorithm development, and rapid prototyping for algorithm 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 staff to develop model-based software. Additional responsibilities may include business development, proposal writing, project management, and customer interfacing.

Minimum Requirements:

- Progress toward a Masters degree or Ph.D. in a quantitative discipline such as Electrical Engineering, Computer Science, Robotics, or Artificial Intelligence. Exemplary Bachelor's degree candidates with a track record of relevant coursework and research will also be considered.
- Knowledge of basic software/data design methods and modeling standards
- At least one of the following:
 - Interest in temporal and relational data mining and probabilistic pattern recognition; social network analysis and/or multi-agent simulation modeling; and working with standard software systems for this kind of analysis such as UCINet or RePAST **OR**
 - Experience implementing algorithms for optimization and probabilistic classification, inference or control models (e.g., Observable and Partially Observable Markov Decision Processes, auction algorithms, gradient and subgradient optimization) **OR**
 - Familiarity with modeling and simulation in Multi-Agent/Robot Coordination or Human-Agent/Robot Interaction problems
- Experience implementing complex algorithms and models in C++, C#, Java, or AnyLogic
- Experience writing technical reports and/or proposals
- U.S. citizenship preferred; U.S. Permanent Residence status considered

The ideal candidate will also possess at least two of the following qualifications:

- Knowledge of basic software/data design methods and modeling standards
- Knowledge of efficient data structures
- Software engineering experience or experience collaborating with a software engineering team

Aptima will not 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.

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