

Intern positions are available at NASA Ames Research Center to participate in the development of an automated decision support system for space missions. Time commitment is negotiable. Master's through early PhD.

The opportunity is focused on developing algorithms and support tools (such as graphical user interfaces, test suites, and automated result explanation software) for the System Health Enabled Realtime Planning Advisor (SHERPA). SHERPA is an artificial intelligence (AI) system for decision support on the VIPER mission. SHERPA has been and continues to be used in different capacities during the mission development phase (including for landing site selection, vehicle design optimization, and candidate mission plans generation). SHERPA will also be used during for mission operations on the surface of the Moon, adjusting mission plans based on the information learned and assisting with contingency situations. SHERPA is being proposed for supporting other mission including: Enceladus Orbilander and other potential Mars and deep space missions.

Required:

- Strong Julia programming language skills
- Background in formal decision making under uncertainty, including methods for generating both online and offline decision-making policies.

Desired:

- Experience in the field of human-computer interaction
- Interest in researching and developing methods for automated decision explanation
- Good software engineering skills (design of unit tests, performance profiling and optimization, documentation, etc)