The Artificial Intelligence Group and the Machine Learning and Instrument Autonomy Group at the Jet Propulsion Laboratory (JPL), California Institute of Technology are seeking candidates at the BA/BS, MA/MS and PhD level to work on fundamental research problems and unique software applications in spacecraft autonomy, scientific data analysis, mission operations automation, and onboard analysis for real-time decisions. Openings in the following areas of research and development exist: planning & scheduling, multi-agent systems, operations research, pattern recognition, data mining, machine learning, and data fusion. Responsibilities for these openings range from research program development to software design and development, with numerous opportunities to immediately contribute to space mission operations and development.

Candidates must hold a degree in Computer Science, Electrical Engineering or a related area, and must possess software development skills in one or more languages: C/C++, Java, Python, or others.

Past projects have included research, demonstration, and deployment for autonomous single rovers and rover swarms, as well as a range of machine learning and data mining efforts. Current tasks include onboard science for the Mars Exploration Rovers, autonomous un piloted aerial vehicles, and ocean surface and submersibles. Recent deployments include the use of the ASPEN system to automate mission planning for Orbital Express and the Autonomous Sciencecraft (ase.jpl.nasa.gov) onboard the EO-1 spacecraft (co-winner 2005 NASA Software of the Year) and operational software on the Mars Exploration Rovers to automatically identify and collect images of rocks (AEGIS, 2011 NASA Software of the Year) and detect and track dust devils and clouds. Autonomy work at JPL has generated new research results on the path towards unprecedented AI and ML applications, while also having significant humanitarian impact via applications such as wildfire detection, measurement of carbon and aerosol emissions, and improved understanding and forecasting of earthquakes.

For further information see our web sites at: ai.jpl.nasa.gov and ml.jpl.nasa.gov

If you are interested in applying for one of these positions, please send a resume and any other supporting materials to the address below (electronic submission of resumes encouraged). Please include an e-mail address and phone number at which you can be reached. Recent graduates are strongly encouraged to apply. Please include information on your citizenship status with your application.

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Send email submissions to: jobs@aig.jpl.nasa.gov