

Opportunity Title: Astrodynamics Applications of Artificial Intelligence

Opportunity Reference Code: 0330-NPP-MAR26-JPL-TechDev

Organization National Aeronautics and Space Administration (NASA)

Reference Code 0330-NPP-MAR26-JPL-TechDev

How to Apply All applications must be submitted in [Zintellect](#)

Please visit the NASA Postdoctoral Program website for application instructions and requirements: [How to Apply | NASA Postdoctoral Program \(oua.org\)](#).

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

Application Deadline 4/2/2026 6:00:59 PM Eastern Time Zone

Description About the [NASA Postdoctoral Program](#)

The [NASA Postdoctoral Program \(NPP\)](#) offers unique research opportunities to highly-talented scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

Description:

The research for this position will focus on the application of artificial intelligence and machine learning to solving complex trajectory design problems. Specific applications will focus on tour design strategies and trajectory design within other multi-body or highly nonlinear systems. The emphasis will be on how AI methods can both characterize and optimize trajectories within complex design spaces. Within this context, contingency planning for robust trajectories under uncertainties and anomalies will also be explored. A range of models including patched two-body systems, the circular restricted three-body problem, and the full ephemeris will be used in relevant analyses. While the developed methods will be generally applicable, the specific problem and models used in the study will depend on the qualifications and interests of the candidate. The emphasis throughout the study will be on developing methods and applications that are useful to the wider community and that can be published in the open literature. Candidates should hold a Ph.D. in a relevant field and have experience in space mission design, trajectory optimization, and the application of machine learning.

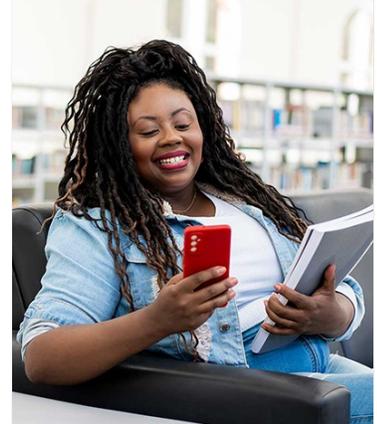
Field of Science: Technology Development

Advisors:

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Applications with citizens from Designated Countries will not be accepted at this time, unless they are Legal Permanent Residents of the United States. A complete list of Designated Countries can be found

at: <https://www.nasa.gov/oiiir/export-control>.

Eligibility is currently open to:

- U.S. Citizens;
- U.S. Lawful Permanent Residents (LPR);
- Foreign Nationals eligible for an Exchange Visitor J-1 visa status; and,
- Applicants for LPR, asylees, or refugees in the U.S. at the time of application with 1) a valid EAD card and 2) I-485 or I-589 forms in pending status

Questions about this opportunity? Please email npp@orau.org

Point of Contact [Mikeala](#)

Eligibility Requirements • **Degree:** Doctoral Degree.