Job Title
Robotics Software Engineer

Job Purpose
ProtoInnovations is developing the next generation of autonomous and semi-autonomous robotic systems for the lunar surface and beyond. As a critical part of this small company, you will be pushed to your intellectual and creative limits as we develop cutting-edge technologies for mobility and manipulation in space.

Job Duties and Responsibilities
As a Robotics Software Engineer you will contribute to many areas, but you will focus on software architecture development, simulation testing, devops, and algorithm development needed for reliable and effective space robotic system operations. You will leverage simulation and physical prototypes to test your work. Your work will mostly take place at ProtoInnovations' physical location in Pittsburgh, PA with some remote work flexibility as you get into a routine. While working here you will be given a great deal of freedom and autonomy with the expectation that this will allow you maintain a work/life balance while still providing significant contributions to the company mission. Some learning on the job is expected because of the nature of what we do at ProtoInnovations, but you will be expected to hit the ground running and start contributing immediately.

Required Qualifications

Personal Attributes
ProtoInnovations is only as good as its people. It is a requirement to have the following personal traits:
- Open and honest
- A team player and independent thinker
- Excited about learning new things
- Always looking to improve
- A good multi-tasker

Education
- M.S. in a STEM field from an accredited university
  - A B.S. with additional work experience may substitute for an M.S.
- Ph.D. may also be desirable and will be evaluated on a case-by-case basis

Experience
- 2+ years of work experience in industry
- Ph.D. lab experience may substitute for lack of work experience

Technical Skills
- Basic knowledge of:
  - Cyberphysical systems
  - Electronics and electrical engineering principles
  - Mechanisms and mechanical engineering principles
  - Signal and data processing
- Familiarity with all of the following:
  - Robotics and mechatronics
  - Software fundamentals
    - Linux
    - Version control (Git/Github/Bitbucket)
    - Test-driven development
  - Software tools, middleware, and programming languages
    - Robot Operating System (ROS) 1 and/or 2
    - Python

- C++
- Additional, focus and knowledge of:
  - Software design patterns, architectures, and implementations in Python and C++
  - Software optimization and modularization
  - Robotics simulation environments
- Bonus:
  - Flight software development experience, e.g., core Flight System and core Flight Executive (cFS and cFE), SpaceROS
  - Familiarity with flight software architectures
  - CI/CD implementations for R&D software and robotics