
Software Engineer I

LOCATION

St. Louis, MO

THE COMPANY

Impossible Sensing develops next-generation optical sensing applications for deployment and operation in the most extreme terrestrial and extraterrestrial environments. We strive to foster a creative, collaborative, and inclusive work environment that combines the best minds with the most innovative optoelectronics and data analytic technologies.

THE POSITION

Under the supervision of a lead Software Engineer, design, build, and test cutting-edge software and firmware for planetary exploration. The Software Engineer works with a multi-disciplinary team in product design, build, and testing of unique sensor systems. The Software Engineer works onsite with our team at the St. Louis, MO facility, and will be employed as a consultant to Impossible Sensing through The SETI Foundation. The position is a part time position (20hrs/week) for the period of about 9 months.

SPECIFIC RESPONSIBILITIES

- Take space hardware and software requirements and desires and translate those into a design for software and firmware that will fly on missions to explore the solar system
- Start-to-finish software and firmware ownership
- Work with the electronics team to co-design instruments, including software to synchronize and control various hardware components (e.g. lasers, cameras, photodetectors, custom hardware, etc.) for both autonomous and human in-the-loop applications
- Collaborate with mechanical, electrical and optical teams
- Thoroughly document design requirements, calculations, power budgets, validation results, etc
- Rapidly iterate as design requirements and vehicle features mature over time

REQUIRED WORK EXPERIENCE

- 0-2 years software design experience
- US Person (Citizen or Permanent Resident)

DESIRED WORK EXPERIENCE

- Requirements and software architecture development
- Verification and Validation testing
- Experience with C/C++
- Experience with a scientific programming language (Python, MATLAB, etc.)
- Experience architecting software systems
- Experience writing software for embedded processors/systems
- Experience with UI development
- Understanding of common communication busses (USB, Ethernet)
- Experience working with microcontrollers
- Understanding of low-level microcontroller communication protocols (I2C, SPI, UART)
- Comfortable working with Microsoft Office
- Outstanding verbal and written skills and experience generating data-driven reports

IMPOSSIBLE