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# Electrical 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 Electrical Engineer, design, build, and test cutting-edge electrical hardware for planetary exploration. The Electrical Engineer works with a multi-disciplinary team in product design, build, and testing of unique sensor systems. The Electrical Engineer works onsite with our team at the St. Louis, MO facility, and will be employed 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 electrical requirements and desires and translate those into a design for hardware that will fly on missions to explore the solar system
- Start-to-finish hardware ownership: Specification, architecture, design, simulation, schematic, PCB layout, prototype, manufacturing or outsourcing of circuit boards, validation, and verification of requirements
- Collaborate with firmware, reliability, program management, mechanical, and EMC 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 electrical design experience
- US Person (Citizen or Permanent Resident)

## DESIRED WORK EXPERIENCE

- Requirements and architecture development
- Design, simulation, build, and prototype testing of electrical components
- Verification and Validation testing
- Strong understanding of:
  - 1) Analog & digital circuits
  - 2) Component selection
- Exceptional organization/documentation and communication skills (both written and verbal)
- Ability to independently identify issues and collectively work out a solution
- Proficiency with lab equipment (oscilloscopes, electronic loads, signal generators, etc)
- Basic programming ability (Python, C, C++, Java, etc)
- Knowledge of aerospace design requirements
- Design for extreme environment systems (Deep Ocean or Deep Space)
- Start-Up Mentality with rigor of established large-scale business practices
- Analog & digital circuits - experience designing custom analog front ends and High-Speed digital interfaces like USB3, Ethernet, LVDS
- Power dissipation, thermal management, etc
- Embedded software design experience (MCU/FPGA)
- Ability to reliably commute to the STL job location

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# IMPOSSIBLE