



BRITESEED

Electrical Engineer

JOB LISTING

Company Name
BriteSeed, LLC

Company Address
4660 N. Ravenswood Ave.
Chicago, IL 60640

Company Point of Contact
Will Nau, PhD
CTO
w.nau@briteseed.com

BriteSeed is a forward-thinking company committed to making minimally invasive surgery safer and more efficient. Our team is developing the next generation of laparoscopic and robotic surgical tools that provide real-time detection and visualization of hidden blood vessels, ureters, and other structures using advanced optics and artificial intelligence.

BriteSeed is supported by the NIH, NSF, the Texas Medical Center, and was named one of the top medical startup companies by the MedTech Innovator.

Job Description

The BriteSeed Engineering Team is seeking a masters-level graduate in electrical engineering or computer science to join our effort to advance the development of real-time optical detection systems. Our team is designing the first integrated tissue detection system for next-gen surgical tools. This professional will work on developing and implementing novel systems for real-time signal acquisition and analysis. System engineering tasks will be pursued like LED sequencing and real-time sequential analysis. Experience in medical devices, optics development, sensing, or hardware testing is desirable.

Education

- Bachelor's degree in Robotics and Electrical Engineering, or related field with 5+ years of work experience or Master's degree in above fields with 3+ years of work experience.

Required Skills & Expertise

- Strong skills in digital and analog system architecture, schematic development and board layout / routing using software such as EAGLE, PADS, Altium or similar
- Experience with embedded system development, digital signal processors and/or Xilinx Zynq-7000 or Zynq Ultrascale+
- Experience with ADCs, DACs, Digital and Analog Filters and I2C/SPI interfaces
- Experience creating electrical circuit schematics and laying out PCBs
- Experience soldering and building PCB assemblies
- Excellent programming skills in VHDL/Verilog and C/C++
- Experience with Vivado and Vitis, and MatLab/GUI development
- Experience with source control. Git familiarity is a plus
- Comfortable debugging prototype circuits (i.e., bench experience using oscilloscopes and other test instruments)
- Ability to work with and construct physical prototypes to troubleshoot and debug firmware
- Experience with creating and maintaining bills of material for circuit assemblies and systems

Preferred Skills & Expertise

- Experience or understanding with imaging sensors (CCD/CMOS) is a plus
- Experience with configuration-management / source-code control and defect tracking tools, like BitBucket, SVN, Jira, etc.
- Experience with creating and maintaining assembly and standard operating procedures
- Experience with wireless consumer technologies, like Wi-Fi, Bluetooth, etc.
- An understanding of networking protocols TLS/ TCP/ UDP/ IP
- Knowledge of SolidWorks
- Experience with software development in compliance with ISO 62304 – Medical Device Software Lifecycle Processes
- Experience with designing electrical systems in compliance with IEC 60601-1 or UL 60601-1 family of standards