



BRITeseed

Electrical Engineer

JOB LISTING

Company Name
BriteSeed, LLC

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Company Point of Contact
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BriteSeed is a forward-thinking company committed to making minimally invasive surgery safer and more efficient. Our team is developing BriteSeed Smart Tools, the next generation of laparoscopic and robotic surgical tools that provide real-time detection and visualization of hidden blood vessels, ureters, and other sensitive 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 masters-level graduates 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 vessel detection system into surgical tools. We are seeking an electrical engineer that 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 (e.g. pulse oximetry), 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 or similar
- Experience with embedded system development and digital signal processors (e.g. TIC55xxx)
- Experience with ADCs, DACs, Digital and Analog Filters and I2C/SPI interfaces
- Good programming skills in assembly language and C/C++
- Code Composer IDE experience a plus, MatLab/GUI experience a plus
- Comfortable debugging prototype circuits (i.e., bench experience using oscilloscopes and other test instruments)
- Experience or understanding with imaging sensors (CCD/CMOS) is a plus
- Experience with source control. Mercurial familiarity is a plus
- Ability to work with and construct physical prototypes to troubleshoot and debug firmware
- Experience reading schematics and using hardware lab equipment such as digital scopes, logic analyzers etc.

Preferred Skills & Expertise

- Experience with creating electrical circuit schematics and laying out PCB's
- Experience with configuration-management / source-code control and defect tracking tools, like Git, BitBucket, SVN, Jira, etc.
- 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