



BRITESEED

Artificial Intelligence Intern

JOB LISTING

Company Name
BriteSeed, LLC

Company Address
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Chicago, IL 60640

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

BriteSeed is seeking a masters-level, artificial intelligence engineer to join our effort to develop real-time optical detection systems which includes the first ever integrated vessel detection system into surgical tools. We are seeking an individual that can effectively implement his/her knowledge of artificial intelligence techniques and related concepts toward improving the sensing capabilities of our current optical system through machine and deep learning.

The intern will work closely with the BriteSeed technical team (Signal Processing Engineer, Electrical Engineer, Research Engineer, and Research Scientist) and Management team daily to refine the technology.

Specific projects and tasks may include:

- Optical signal analysis of Hyperspectral Imaging Spectroscopy data for advanced tissue, artery and vein localization. Projects may include application of techniques and development of new approaches within:
 - blind source separation and clustering and classification algorithms,
 - machine learning algorithms with time series data, and
 - deep learning from surgical video feed.
- Surgical video classification and surgical workflow analysis. This could include:
 - development of a video library from various sources,
 - designing and implementing techniques for real-time “turn-by-turn” directions and post-surgical analysis and performance scoring.
- Integration of Optical data with Surgical video data for enhanced performance.

Education

- Bachelor's degree in Engineering, Computer Science, Data Analytics or related field with 2+ years of work experience in these fields

Skills & Expertise

- Understanding of machine learning, deep learning, natural language processing; ability to discuss pros and cons of modeling approaches
- Proficiency with programming languages including MatLab and C/C++
- Ability to design and optimize databases and integrate discrete data sets
- Strong problem-solving, verbal, and written communication skills

Preferred Skills & Expertise

- Strong preference for experience in Predictive Analytics, Software Development, medical device development, electrical engineering and/or computer science