



Medical Device Algorithm Development Internship

Primary Skills Required: Image algorithm development, strong mathematics (primarily 3D geometry and linear algebra), C++.

Detailed Description: This internship will involve designing an algorithm for creating image mosaics from a live video feed of a novel imaging modality. Specific requirements will include:

- Working with professional medical imaging software code to capture microscopic imaging data.
- Working with the interface between physical hardware and software drivers for the imaging system.
- Designing quality control experiments to test out the algorithm developed.
- Architecting an algorithm combining the above components into a software package which will be used in a professional medical device.
- Understand how government quality and regulatory standards fit into medical algorithm development work.

Logistics: This internship will be built from the ground up studying the existing algorithms in the literature, followed by designing a medical imaging algorithm for professional use. The intern will be given a “sandbox” code base in git, entirely written in C++ using CMake. The coding work will be done with the intern’s own computer using an appropriate development environment (gcc, clang, or Visual Studio), and video chats once per week will be conducted with the Founder & CEO Dr. Rob Toth to determine progress, code review, critiques, improvements, and for algorithm brainstorming.