SureScan employees work closely with the product, making a difference every day to protect people and improve security. We are always looking to hire the most talented, innovative and enthusiastic individuals for developing, manufacturing, and marketing explosive detection systems.

SureScan offers a variety of employment opportunities for creative and qualified individuals who think out of the box with skills in the fields of Engineering, Mathematics, Quality, Software Development, and Program Management. We are seeking candidates with industry experience as well as recent graduates and those with research experience. Candidates with U.S. security clearance are a plus for appropriate positions.

Our employees enjoy a benefit package, which includes health coverage, a retirement savings plan, time off and an exciting work environment. SureScan is an equal opportunity employer. Qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, sexual orientation, gender identity, disability or protected veteran status. Email your cover letter, CV and salary requirement to: **employment@surescaneds.com**.

Principal Software Engineer

Reports to: Manager, Core Technology

Description
The Principal Software Engineer will apply strong mathematical skills and a background in numeric intensive computing applications, machine vision, or image processing to work as part of a cohesive team to develop algorithms for reconstruction, segmentation and classification of targets as part of an automated explosive detection system. He/she will develop, implement and optimize algorithms using parallel programming, distributed computing and other advanced processing schemes.

Duties & Responsibilities
The Principal Software Engineer is responsible to support algorithm code development for computed tomography reconstruction, segmentation and classification of objects in a three dimensional image on a Computed Tomography (CT) explosive detection system. Primary responsibilities will be in image reconstruction, segmentation, rendering and other image data processing algorithms. The Principal Software Engineer will work with a team of software engineers and physicists to design and implement algorithms for 3D reconstruction, material detection and classification. Activities include development of CT algorithms, software applications, simulation and testing of algorithms, data analysis in support of algorithm validation and optimization of algorithms.

Education & Experience
- BS or higher in Computer Science, Mathematics or Electrical Engineering
- 8+ years of professional software development experience
- Must be eligible to obtain security clearance

Minimum Qualifications
- Strong knowledge of C/C++ and object oriented programming
- Experience developing multi-threaded applications for Windows and Linux platforms
- Experience developing CUDA applications for GPU architectures
- Experience implementing real time image processing algorithms (2D, 3D)

- Strong knowledge of Intel CPU and NVIDIA GPU architectures
- Effective use of Microsoft Office suite including Word, Excel, PowerPoint and Visio
- Effective written, verbal, interpersonal communication and teamwork skills
- Ability to work with a remote team of engineers and scientists
- High degree of commitment, flexibility, self-motivation, self-confidence, assertiveness, and high tolerance of ambiguity
- Highly motivated individual able to maintain focus and produce results in a remote setting without a lot of direct supervision

Desired Qualifications
- Strong technology skills, including proficient use of programming languages, compilers, debuggers, Linux and Windows operating systems and high performance computing platforms
- Prior experience in developing software with complex mathematical algorithms for medical diagnostic imaging applications, especially computed tomography
- Experience in porting MATLAB (or similar) applications to C/C++ and/or CUDA
- Prior experience with complex image reconstruction/analysis software algorithms is strongly desired
- Experience with systems and software algorithms for algebraic reconstruction and/or statistical iterative reconstruction is desired
- Experience with 3D and 2D rendering using OpenGL or rendering libraries such as VTK
- Experience optimizing software applications for multi-core CPUs using methods like OpenMP
- Experience with designing and implementing graphical user interfaces using Qt
- Experience developing software for high performance computing environments
- Experience developing and debugging software on distributed architectures
- Experience developing TCP/IP socket applications
- Capable of holding US Security Clearance at Secret level

Physical Demands
The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.
- While performing the duties of this job, the employee is frequently required to sit
- The employee is occasionally required to stand and walk
- Lift and/or move up to 50 pounds
- Specific vision abilities required by this job include close vision, distance vision and depth perception

Work Environment
The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.
- While performing the duties of this Job, the employee is occasionally exposed to moving mechanical parts and X-ray equipment
- The noise level in the work environment is usually moderate
- Travel may be required, which will typically be less than 10% of time