

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@surescans.com](mailto:employment@surescans.com).

## **Senior Software Engineer – Architect**

**Reports to:** Manager, Core Technology

### **Description**

The Senior Software Engineer – Architect will define and lead the development of processing solutions that emulate SureScan’s aviation security products. He/she will design a solution to emulate the capabilities of the image generation, detection algorithms and image review used for SureScan’s explosive detection systems. Emulation capabilities shall be developed for internal and external use during the certification testing of scanner detection capability. Emulation capabilities must demonstrate equivalence to scanner results, but may operate slower than the scanner real-time implementation. The Senior Software Engineer – Architect will apply his/her knowledge of numeric intensive computing applications, machine vision, or image processing to develop architectures for emulation of image reconstruction, segmentation and rendering emulate the full image processing sequence of an automated explosive detection system.

The Senior Software Engineer – Architect will support code development by working with software developers to design and implement Emulation software applications that meet performance and time (latency) requirements. He/she will support development of image presentation applications that optimize segmented item definitions to enhance image interpretation and facilitate decision-making by the end user.

### **Duties & Responsibilities**

The Senior Software Engineer – Architect is responsible to develop software architecture for SureScan Emulation solutions. He/she will develop architectures for emulation of image reconstruction, segmentation and rendering to emulate the full image processing sequence of an automated explosive detection system including definition of COTS processing equipment and platforms.

The Senior Software Engineer – Architect will work with software developers to implement, verify and validate Emulation solutions for SureScan’s aviation security products.

The Senior Software Engineer – Architect will support all Emulation activities required for third party and regulatory evaluation and certification/approval of products for explosive detection system applications.

## **Education & Experience**

- BS or higher in Computer Science, related field or equivalent professional experience
- Minimum 8 years of software development experience
- Previous experience as a technical lead or software architect
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## **Minimum Qualifications**

- Strong knowledge of C/C++, object oriented programming and design
- Strong knowledge of Intel CPU and NVIDIA GPU architectures
- Experience with cross-platform design and development (Windows & Linux)
- Experience designing and developing multi-threaded applications for Windows and Linux environments
- Experience designing, developing and working with dynamically linked libraries (Windows) and/or shared objects (Linux)
- Experience with computer vision algorithms and real time image processing (2D, 3D)
- Experience working with GPU technologies such as CUDA, OpenGL or similar
- Experience defining and working within a software development process and adhering to software quality standards
- Experience using version control systems (SVN, Git, CVS, Perforce or similar)
- Strong technology skills, including proficient use of programming languages, compilers, debuggers, Linux and Windows operating systems and high performance computing platforms
- Effective use of Microsoft Office suite including Word, Excel, PowerPoint and Visio
- Excellent written, verbal, and interpersonal communication and teamwork skills
- Ability to mentor software engineers
- Highly motivated individual able to maintain focus and produce results without a lot of direct supervision
- High degree of commitment, flexibility, self-motivation, self-confidence and assertiveness
- Must be a US citizen or Green Card holder and authorized to work in the United States

## **Desired Qualifications**

- Experience with networking protocols (TCP/IP and UDP)
- Experience with database development (MySQL or similar)
- Experience designing and developing software for parallel processing (OpenMP), distributed computing or high performance computing (HPC)
- Experience with algorithm development and modeling environments (MATLAB or similar)
- Experience with designing and implementing graphical user interfaces (Qt or similar)
- Experience with visualization applications in the security or medical industries, especially X-ray and/or CT based data
- Experience with Emulation and/or Certification of aviation security products
- Experience with algorithm modeling, simulation and analysis
- PhD or MS in Computer Science, Electrical Engineering, Applied Mathematics, Physics or other field of science or engineering
- 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