



Principal Software Engineer/Software Architect

Overview: Quadridox Inc. is seeking a full-time Principal Software Engineer/Architect to lead the development of data acquisition, processing, reconstruction and simulation software for next-generation X-ray imaging systems. Quadridox is a small business with focus on design, implementation and analysis of X-ray sensing and measurement systems in the security, medical, and non-destructive testing domains. The current project focuses on the development of a novel X-ray scanner to identify explosives and other contraband materials in the aviation security arena, cancer and disease in the medical space, as well as anomalous material characteristics in the non-destructive testing and industrial spaces.

Description: We are on the lookout for an exceptional Principal Software Engineer/Software Architect to spearhead our software development initiatives. This pivotal role encompasses driving the high-level design and implementation of software for our state-of-the-art X-ray imaging systems. You will be instrumental in leading the design, development, and testing of data acquisition and analysis software, working in tandem with senior technical roles and company leadership. Reporting directly to the senior management, you will be entrusted with a leadership role that blends technical prowess with strategic oversight, ensuring our technology not only meets but exceeds the expectations of our clients and partners.

As a central figure in our team, your responsibilities will not only include crafting and coding advanced software solutions but also mentoring junior engineers, evolving our software engineering practices, and engaging in detailed project planning. This includes the development of software control systems, where you will focus on interfacing with hardware controllers, establishing data acquisition protocols, and crafting intuitive graphical user interface for X-ray scanner operation. You will help lead the development of image acquisition, readout, and display software, and implement/refining data processing algorithms with a particular emphasis on leveraging machine learning techniques.

Major responsibilities

- Lead the architecture/design of control system, image acquisition, and analysis software for prototype, next-generation X-ray imaging systems, ensuring they meet both current and future needs.
- Implement software engineering best practices, including code reviews, continuous integration, and automated testing.
- Write robust, efficient, and maintainable code, while also actively contributing to hands-on coding tasks.
- Mentor junior software engineers, fostering a culture of technical excellence and continuous learning.
- Collaborate with cross-functional teams in project planning, providing technical insights and estimates.
- Stay abreast of emerging technologies and trends to incorporate into our technology stack where appropriate.
- Ensure software scalability, security, and performance standards are met.
- Participate in troubleshooting and resolving complex software issues.



Basic qualifications

- BS or MS in computer science, computer engineering, electrical engineering, or related field
- Proficient in C/C++, C#, Python, Linux
- 5+ years relevant experience
- Experience and/or desire to lead and mentor other engineers/developers
- Strong understanding of software engineering principles and agile methodologies.
- Excellent problem-solving skills and ability to think strategically about software design.
- Proven track record of mentoring and leading software engineering teams.
- Exceptional communication and collaboration skills.
- Ability to hold US govt security clearance

Preferred qualifications

- Experience with software control system development
- Extensive experience in software in high-tech or X-ray technology fields.
- Working knowledge of signal processing and machine learning
- Experience with MATLAB, CUDA, OpenCV
- Proficiency in multiple programming languages and frameworks.

What We Offer

- Competitive salary
- Equity options enabling further engagement with our company growth and success
- Full health benefits with fully covered premiums
- Flexible schedules to support work-life balance
- A chance to be part of a growing startup with a cutting-edge technology focus.
- Opportunities for personal and professional growth.

Location: Hillsborough, NC

Application: To apply, please send your resume and a cover letter to careers@quadridox.com

Affirmative action

Quadridox Inc. is an Equal Employment Opportunity and Affirmative Action Employer and supports a diverse and inclusive work environment. We do not discriminate based on age, race, color, gender identity, religion, nationality, sexual orientation, marital status, pregnancy, medical condition, genetic information, military or veteran status, or physical or mental disability.