Job Description

Title*: SYSTEMS ARCHITECT – ALGORITHMS*   Cost Ctr: *ENGINEERING*____

Work Location: __*ADDISON*_____   Position Status: ☒ Full-time   ☐ Part-time

Division & Department: __*ENGINEERING*_____

Position Reports to: __*DIRECTOR, ENGINEERING*_

COMPANY VALUES

All Authentix employees are expected to embrace our Company values in the performance of their respective tasks and duties.

Always with *integrity*.......Authentixians value:
- Teaming and collaboration
- Advancing science and technology - for a better world
- Dedicating ourselves to our clients' success
- Competing and winning in the marketplace

JOB SUMMARY

The Systems Architect, Algorithms will work closely with the members of a multi-disciplinary engineering team throughout the development process, from supporting initial proposals and feasibility studies through algorithm development, implementation, validation, optimization and system deployment. The Systems Architect, Algorithms develops image recognition and processing algorithms for complex sensor systems for use in high-speed banknote processing machines. The algorithms detect and measure specific banknote features from high resolution images. . In addition, this position consults and develops algorithms to support solutions for other business fields within the company.

SUMMARY OF ESSENTIAL JOB FUNCTIONS

The essential functions listed below are representative of the functions that must be performed in order to satisfactorily fulfill the purpose of this job. Additional functions and duties may be assumed or assigned from time to time.

- Develop high-speed image and signal processing algorithms to detect and measure specific features, defects, and characteristics of banknotes and secure documents
- Partner with other engineering team members to architect, develop and implement the overall solution
- Participate in technical discussions with customers to determine requirements for algorithm performance while carefully balancing the customer's use case with the technical capabilities of the system
- Bring forward creative ideas and drive innovation
- Determine the approach for validating and verifying system performance
- Optimize image processing end to end system performance
- Research and resolve complex system and software problems

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KNOWLEDGE, SKILLS AND ABILITIES

To perform this job successfully, an individual must be able to perform each essential function satisfactorily. The requirements listed below are representative of the knowledge, skills and/or abilities required to satisfactorily perform the essential functions of this job.

- Master of Science in Engineering, Mathematics, Applied Physics or equivalent
- Strong critical thinking and problem-solving skills
- Interested in applying a broad engineering and scientific background to develop innovation solutions to real world problems
- Experience programming in C++ and Python
- Experience using Matlab or equivalent environment
- Working knowledge of optics, spectroscopy, electronics, optoelectronics and thermal modeling
- Strong written communication skills including ability to write white papers and technical specifications
- Experience with AI (ML, Deep Learning) and data science is a plus
- Willingness to learn, collaborate, help and be up to date with technology
- Self-starter with the ability to work autonomously
- Strong interpersonal skills
- Ability to obtain Security Clearance

SPECIAL REQUIREMENTS

- Travel 10 percent

WORK REQUIREMENTS`

The work environment characteristics are representative of those an employee encounters while performing the job. Authentix is committed to complying with all applicable provisions of the Americans with Disabilities Act (ADA), the ADA Amendments of 2008 and all applicable state and local laws concerning disability accommodation. Reasonable accommodations will be provided to individuals with known physical or mental disabilities if such accommodation would not impose an undue hardship on the company, and would enable the individual to apply for, or perform, the essential functions of the position in question.

Environment: Work is performed primarily in a standard [*office/warehouse/lab*] environment. Employees may work under the stress of regular interdepartmental interaction and pressure to meet various deadlines.

Physical: Essential functions require sufficient physical ability and mobility to work in an [*office/warehouse/lab*] setting. While performing the duties of this job, the employee is frequently required to stand and/or sit for prolonged periods of time; must be able to hear and verbally communicate in order to exchange information in person or over the phone; to occasionally stoop, bend, kneel, crouch, reach and twist; to lift, carry, push and/or pull up to 25 pounds of weight; to operate office equipment requiring repetitive hand movement; to occasionally travel to other locations using various modes of private or commercial transportation.

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NOTIFICATION

This Job Description is intended to describe the general nature and level of work being performed by people assigned to this job and is not considered an exhaustive list of all responsibilities, duties and required skills. This Job Description does not constitute an offer of employment. The employment relationship between the Company and its employees is "At-Will" and based on mutual consent. Authentix, Inc. is an Equal Opportunity Employer.

Human Resources use only	
Job Title	Systems Architect – Algorithms
Management (Yes / No)	Yes
Status (Exempt / Non-Exempt)	
Date Revised	
HR Approval Signature / Date	
Executive Approval Signature / Date	