Position Description

Position Title: Software Engineer, Embedded

Reports to: Manager, Software Engineering

Position Summary:

The Software Engineer, Embedded implements image processing algorithms for complex sensor systems for use in high-speed banknote sorting applications. The algorithms detect and measure specific banknote features from 2-D monochrome, color, and/or hyper-spectral images. The Software Engineer, Embedded solves complex algorithm implementation problems. The Software Engineer, Embedded provides technical and administrative direction for personnel performing software development tasks, including the review of work products for correctness, adherence to the design concept and to user standards, and for progress in accordance with schedules.

The Software Engineer, Embedded has a strong understanding of efficient use of data structures. Mastery of algorithm design and implementation criteria including divide and conquer techniques, path-finding, greedy decision making, linear programming based optimization techniques, and practical concerns such as the relationship between data modeling and an algorithm performance and correctness.

The Software Engineer, Embedded possesses an advanced understanding of algorithmic methods for processing signals to achieve highly efficient code implementations. An important aspect of the position is to reconcile real-world observations with analytic predictions or simulation models. These models are used to create algorithms that effectively deal with real-world non-idealities. Many times development is done by gathering real sensor data and using that data as input for simulations of candidate algorithms. When acceptable algorithms are found, those algorithms are optimized for implementation in an embedded processor as part of this role.

 The Software Engineer, Embedded 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, and system deployment.

Key Skills:
- Strong critical thinking and problem-solving skills
- Embedded programming in C/C++
- Experience implementing complex algorithms from concept through implementation
- Experience applying statistical signal processing techniques to detect/measure features in 2-D images
- Expert level experience writing code for DSP processors
- Strong interpersonal skills
- Excellent writing skills
- Experience using Microsoft Word, Excel, and Visio

- Ability to handle multiple simultaneous tasks

Roles & Responsibilities:
- Develop and/or implement algorithms that meet the customer acceptance criteria
- Implement algorithms working with your algorithm (Matlab) developer counterpart to ensure Matlab and DSP implementations are in agreement
- Implement algorithms that not only meet customer acceptance criteria but have a bias towards the customer experience
- Submit weekly status reports highlighting status against schedule, obstacles, and risk mitigation strategy
- Develop and execute unit level prototype and feature specific test plans
- Create aggressive yet achievable project schedule for assigned tasks
- Partner with field personnel on resolution of customer issues
- Own the overall customer solution, such that your job is not done when the algorithm is implemented, work with your algorithm and ARM developer partners to deliver the solution on time and in specification
- Assess project risks and identify mitigation strategies
- Participate in developing/enhancing software engineering processes

Company Values

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

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

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.

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.