Job Description: Software Developer

Background:

PypeServer creates CAM software for pipe cutting and other metal fabrication processes across numerous industries. We automate the workflow from CAD systems to numerically controlled and manual cutting tools. Our software takes pipe and pipe layout designs from upstream CAD and Building Information Modelling (BIM) tools and translates them into G-code and other control languages for various machines. In the process, we nest parts together to optimize production, minimize material waste, track part status and processing time, manage part and raw material inventory, generate QR-coded tracking labels that link back to design drawings and other info, and pass information back upstream for process optimization.

PypeServer's initial focus has been on multi-axis pipe profilers that cut pipe to length and add holes and other features prior to welding. We are now expanding to other shop tools for both cutting and welding as well as expanding our own cloud functionality and our interaction with other remote- and cloud-based solutions used by our customers. Our mission is to unify the shop floor on one easy to use software system that connects to all design software and runs all machines.

Role

This role will allow you to exercise and develop a wide range of skills, working on many sections of code using advanced toolsets that you can help choose. We require the ability to conceive of solutions, to write specifications, to autonomously implement those solutions, and to further improve them beyond initial specifications. As a small, office-less company in a dynamic industry, you will need to work well with others remotely and thrive in an environment where you have to learn and implement new things quickly. Opportunities for growth will be numerous.

Our system requires development in areas of C# client application development, SQL programming, REST API development, graphics development, data mapping and synchronization, complex mathematical solutions, security, machine control and (longer term) cloud solutions development. There will be some customer interaction, though mostly at the feature-completion level.

Responsibilities:

Depending your specific interests and skillsets, some or all of these responsibilities will apply:

- Become fluent with the existing PypeServer application, including its architecture, algorithms, and user interface to the point of being able to debug and develop new features in the context of the existing code base
- Write code that takes data from PypeServer to control machines using a variety of communication interfaces and formats

- Develop User Interfaces for new PypeServer features that make it easy and efficient for PypeServer users to get designs from CAD and BIM through to machines for fabrication
- Develop data exchange interfaces with various CAD and BIM design software tools using PCF, CSV, DXF, DWG, JSON, ITM, and other file formats as well as various web APIs
- Develop nesting algorithms for 1D, 2D, and 3D cut paths in both cartesian and radial coordinate systems
- Develop cut-path following solutions for complex shapes like I-beams
- Provide customer support, both remote and occasionally in person (travel < 10% of time)

Core Competencies & Tools:

- Autonomous, driven worker
- Ability and passion for developing friendly and intuitive user interfaces and create end-user documents explaining what you develop
- C# development in the Visual Studio environment with .Net, GIT, Jira
- Developing against SQL and writing some SQL scripts
- Ability to conceptualize and work with 3D vector math
- Ability to work with graphics APIs
- REST API development a plus
- Understanding of machine control systems a plus
- Familiarity with the mechanical contracting (building) industry a plus

Submit resume to: recruiting@pypeserver.com