Sienci Labs: Full-stack Developer Position

Background

We're Sienci Labs and we've made it our business to bring previously industrial manufacturing technologies to the masses. Our companys focus is on CNC routers. Just as 3D printing acts as an additive manufacturing technology to build up unique parts, so CNC routers act as a subtractive manufacturing technology to remove material from a blank to create a finished part.

We believe that the availability of more accessible, small-scale manufacturing is important for two reasons:

1. It acts as a stepping stone to more industrial technologies, carrying over many of the operating concepts without the same upfront costs. This has applications in education - preparing children for manufacturing - and for small, growing businesses who look to prototype a product or expand their in-house production.
2. It lowers both the financial and learning barrier for individuals to create a variety of projects for themselves at home. Small-scale manufacturing technologies are able to perform better than many combinations of individual hand tools or power tools all while taking up less space.

Our work revolves around creating both the hardware and software solutions needed to simplify and automate manufacturing so that businesses and consumers can more quickly innovate and bring products to market. We envision the future of automated manufacturing to be a simple one, product creation with the press of a button.

Job Description

There's a lot of innovation to be done in the CNC router market. As the machines themselves continue to become easier to assemble and use, the software aspect has lagged behind. Consumers and businesses need an easy way to go from an idea to a finished product without the learning curve that's normally associated with complex, industrial machinery.

We're looking for a software developer who loves moving fast and proving to the world that "it can be done". You should want to work with both hardware and software developers to create harmony in awesome products.

Great assets to have for this job:

- Good experience creating web applications with Javascript, HTML, and CSS
- Familiarity with the Node ecosystem including package management and build tools such as Webpack
- Experience building cross-platform desktop apps using Electron
- Familiarity with the Three.js (or a related) JS library

- Interest in UX and human-centered design

Secondary assets:

- Experience with Raspberry Pi, Arduino, and other microcontrollers/computers
- Understanding of networking hardware and computers (systems communication)
- Interest in rapid prototyping tools, such as 3D printers, CNC milling machines, and laser cutters

We have a variety of active projects that are each unique and interesting in their own regard. From finding new ways to streamline interfacing with our CNC routers to creating new customer-facing software tools, your contributions will go towards aiding our CNC community to thrive and will open doors for many more individuals or businesses looking to start with CNC.

In order of execution, three examples of ongoing projects that you will be involved in include:

1. **CNC Machine Interface**: once a user want to use their CNC router to run a project, there needs to be some sort of interface in place so that they can connect via a separate computer, load cutting files, control machine positioning, receive live feedback, etc. There are already a handful of open-source options being used in the hobby CNC market and we plan on expanding on these to bring more user-centric design and features to the forefront.
2. **CNC File Sharing Site**: with some development begun and having gone through many mockup revisions already, the purpose of this file sharing site is to harbour an online CNC commonalty of individuals by allowing them to post projects, alter existing projects, find inspiration from others, learn about new CNC techniques, and interact with each other no matter the make of their CNC machine.
3. **CAMLab**: a simple yet powerful CNC CAM program that runs entirely within your browser. CAMLab helps to create and output gcode for 2D engraving, 2.5D profiles, and 3D reliefs to a variety of CNC routers with ease by taking a 3D model as input. CAMLab is open-source and is based on Kiri:Moto; we work very closely with its primary developer.

Looking to fill this position by the start of January, 2021.

Company

We are a rapidly growing hardware company who really cares about our employees & customers. Our aim is to provide a relaxed work environment with space to learn, grow and adapt.

We have flexible work hours, but our core hours are from 10am to 4pm. Please email us at work@sienci.com, with the position as the subject and with your resume attached. Please also

provide salary expectations, and other relevant details to be considered such as a portfolio, past projects, or side hustles if you've got other work that you're proud of.

As part of your application, please provide a two-sentence, high-level overview of how our CAMLab software operates. You can assume it functions identically to Kiri:Moto, and thus can refer to Kiri:Motos source code.

Your work will be done out of our office which is based in Waterloo, ON - approximately 1.5 hours from Toronto, though it will temporarily be remote until we deem it safe to resume in-person work within our office space.

Due to the high volume of applications, only applicants of interest will be contacted.