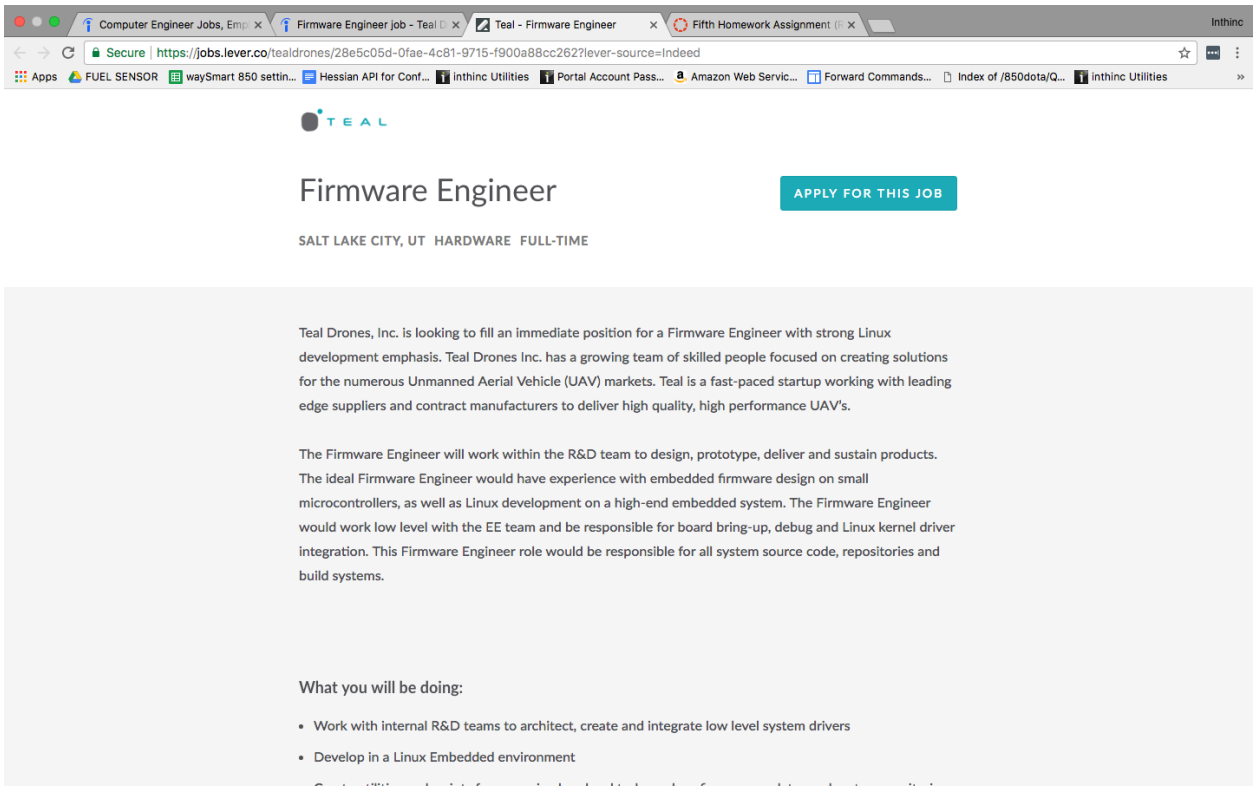
Nathan Donaldson
U0632803



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Firmware Engineer

Teal Drones - Salt Lake City, UT

Teal Drones, Inc. is looking to fill an immediate position for a Firmware Engineer with strong Linux development emphasis. Teal Drones Inc. has a growing team of skilled people focused on creating solutions for the numerous Unmanned Aerial Vehicle (UAV) markets. Teal is a fast-paced startup working with leading edge suppliers and contract manufacturers to deliver high quality, high performance UAV's.

The Firmware Engineer will work within the R&D team to design, prototype, deliver and sustain products. The ideal Firmware Engineer would have experience with embedded firmware design on small microcontrollers, as well as Linux development on a high-end embedded system. The Firmware Engineer would work low level with the EE team and be responsible for board bring-up, debug and Linux kernel driver integration. This Firmware Engineer role would be responsible for all system source code, repositories and build systems.

What you will be doing:

- Work with internal R&D teams to architect, create and integrate low level system drivers
- Develop in a Linux Embedded environment
- Create utilities and scripts for managing low-level tasks such as firmware updates and system monitoring
- Architect and optimize interfaces and protocols between the hardware and application software layers
- Understand and implement fundamental principles of repository source trees, version control and build systems
- Use of engineering test equipment used in debugging and validation of the hardware
- Creating and managing test environments to validate and verify low level firmware between the hardware and application software
- Design and implement manufacturing and validation tests for high-volume production at a contract manufacturing site.
- Work with compilers and computer languages such as C/C++ and Python for programming, and automation/scripting software for code testing

What you need to know:

- A Bachelor's degree in Electrical Engineering or Computer Science is preferred but not required. Other candidates with strong related experience will be considered
- Basic understanding of engineering principles with the ability to read electrical schematics.
- The candidate should have 3+ years' experience
- Experience and strong background developing in an embedded Linux environment is preferred
- The candidate should have a good understanding of Agile and classic development processes and understand best practice development techniques
- The candidate must have excellent communication skills
- Must be able to work in a team environment to help coordinating multiple tasks between internal team members and external partners

Teal is a young company aimed toward establishing itself as a technology provider to the UAV market. We want to build a team of collaborative professionals with integrity and intent. We at teal enjoy sharing and combining our know how and experiences and together we imagine, create and win! In the sky, there is no limit.

30+ days ago - original job

Nathan Donaldson

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(801)833-6605

COMPUTER SKILLS

Programing Languages: •Java • Matlab •C# •C •Verilog •C++ •Kotlin

Software: •IDE: Eclipse SDK •Microsoft Visual Studio •MySQL •Platforms: Linux, Windows, Mac •Microsoft Office •ISE •Qt •Keil uVision5 •Android Studio

Hardware: •Circuit Design/Analysis and Knowledge of Computer Architecture/Design •STM3270 Discovery Board •Salae Logic Analyzers •Orbcomm Products •FPGA •Stepper Motors

WORK/EXPERIENCE

Firmware Engineer / Software Developer, Orbcomm — March 2017 – Present

- Android development and testing for our safety products.
- Work with team to ensure goals are met by certain dates for customers.
- Keep work organized on a rally board, while maintaining Agile development.
- Worked on HOS/ELD mandates for government law with trucking companies.
- Helped implement fuel sensor that worked with our products to minimize fuel theft.
- Worked on FOB/RFID readers and how they interact with our products.
- Implemented auto APN switching for our products out in the field to reduce manual labor.

University of Utah

Java Development:

- Developed a search program (such as Google) using the techniques of paired programming.
- Developed and implemented a mobile online Battleship game application for Android devices.

C# Development:

- Developed an Excel-like Spreadsheet program that had various solutions.
- Developed an online 2-player boggle game client with a viewable backend via HTML.

C++ Development:

- Developed a sprite editor in Qt with a team of 4 other people with multiple features.
- Developed educational video game teaching physics to elementary students in Qt with a team of 7.

Circuitry/Hardware:

- Developed crane game with VGA display, NES controller, and Java compiler using FPGA in a team of 4.
- Developed tilt marble game with STM32F0 gyroscope, using SPI/USART communication in a team of 3.

EDUCATION

AAS

Taylorsville, Utah — GPA: 3.091 — 2009-2011

BS, Computer Engineering

University of Utah, Salt Lake City, UT — GPA: 2.955 — 2011-2018

Courses

- CS 3700 - Digital System Design
- ECE 5780 - Embedded Systems
- CS 3505 - Software Practice II
- CS 3710 - Computer Design
- CS 4400 - Computer Systems
- ECE 2280 - Fundamental Eng. Electronics