Morris Buel

Software Engineer

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EXPERIENCE

Sea-Bird Scientific, Bellevue, WA — Remote Contract Software Engineer

April 2021- Current

Responsible for helping update the UI on companies Full Stack Calibration software. I chose to implement a React interface configuration page, for maintainability and ease of UI testing. The team also has me running test calibrations with their hardware remotely to verify their changes have not broken code. In future sprints, I will be working with the back end (PHP) and database (MySQL) and the front end (JavaScript) to implement bug fixes / new features.

Sea-Bird Scientific, Bellevue, WA — Software Engineer I

October 2018- December 2020

Responsible for developing internal and customer facing software. Also maintaining existing technology stack, in JAVA and C# as bugs and feature requests are prioritized to work on. Successfully worked from home remotely for the remainder of my contract at Sea-Bird Scientific. (March 2020 - December 2020)

Accomplishments
- Worked with internal software team to develop web-based software for instrument calibrations
  - I was responsible for developing the PHP back end that takes the Calibration data sent from the front end and generates a PDF output, automatically saved to a network folder.
  - When resources on the front-end were constrained, I ended up working on the front end (JavaScript) code as well. Implemented desktop-like functionality in the web app, to process calibration data - and hide appropriate buttons that are not yet implemented, or not valid for the selected device.
- Fixed threading issue with polled Java software interacting with FTDI Serial port.
  - Program used a poll to check the FTDI comm list for Sea-Bird devices. That polling window was not dynamic and ran into timing problems with greater than four ports.
  - Ran several benchmarks to determine discovery time for each individual FTDI port and determined how to dynamically change the polling time when new FTDI devices were attached to the computer.

SKILLS

JavaScript
HTML
CSS
C#
React
Ruby
PHP
Java
GitHub
Jenkins
Perforce

Certificates

BS in Software Dev (2018)

Comptia Security+(2017)

Java Certification (2016)

Comptia A+ (2014)

- - - Implemented solution, adjusts polling interval based on number of FTDI devices connected, so that a customer with 16 devices or more will still be able to connect to their devices without connection issues.
  - Responsible for maintaining and updating CI/CD server (Jenkins) for existing projects and new projects.
    - Researched and tested a variety of CI/CD solutions, before determining that Jenkins was the best solution for our team. The flexibility, and manageability made it work better for our team's needs.
    - Jenkins pipeline solution for new projects, to make future projects more modular and portable.
    - Enabled SonarQube coverage results and monitoring to projects, to improve our customer facing software.

Sea-Bird Scientific, Bellevue, WA — Production Engineer
November 2016 - October 2018

Ensuring that Production was able to meet its requirements by dealing with technical issues as they happened. Also responsible as a Liaison between R&D and Production to help implement new products. Helped improve documentation in the Assembly and Test departments. Created new assembly drawings in Autocad as required.

Accomplishments
- - Improved a LabVIEW testing system that a prior employee developed.
  - The application stack was attempting to help the Electronics Technicians, test their board stacks with greater efficiency. Improving test times by at least 30%.
  - Application as left to company, was not maintainable (lots of spaghetti code) not tested (not unit tested) and not modular. I was tasked with adding more products to the system, as it was improving test times, but as it was developed adding a new product would take at least 3 man months. I proposed a project to instead spend that time improving the LabVIEW stack to be tested, modular and removing hard to read code.
  - The first step was working on making the code more "class based", to function like a traditional object oriented programming language. This helped implement unit testing, and with unit testing implemented, I could work to make adding products become more modular.
  - The end result was the ability to add a new product in less than a week of man hours, and the resulting code was more stable and quicker. It produced an additional 30% improvement in testing time for existing products.

AltCademy, online — *Full Stack Training Program*

March 2021 - January 2022 (planned to finish earlier)

During my time between jobs, I set up personal sprints to improve my coding capability from training on Udemy. Starting in March 2021, after researching various options, seeing the competitiveness for the field, I decided to enroll in AltCademy Full Stack training program, to increase my skill-set in my desired field and technology stack.

The course is scheduled to take about 9 months, I've already finished half of the courses and I'm four months ahead of schedule. Every application is responsive, and this is something the course work emphasizes given the prevalence of users on their mobile phones primarily.

Course Highlights:

Currency Converter Application - React Course

https://shrouded-shore-76986.herokuapp.com

https://github.com/mbuel/currency-converter-v2

Tasked with building my own Currency Converter from scratch written in React. I decided to make a one page application, and used tabs to switch between a time series graph and a table of all the currencies. I used JavaScript for switching which component to display in the sub-window.

The application includes a filter on the drop down lists, that allows for real time searching of a currency so you don't have to scroll through the list. When you change the input currency value, it automatically updates the output value and the currency table (allowing you to see the converted output in every currency) in real-time.

Note taking application - Full Stack (JS, HTML, CSS)

https://vigilant-kirch-cddfc3.netlify.app/

https://github.com/mbuel/todo-list

Tasked with building a simple note application, I implemented a Model, View, Controller infrastructure for the application. Since there are so many of these projects out there, I also implemented a unique and animated UI that helps it stand out from the crowd.

WGU, online — *BS in Software Development*

Oct 2014 - May 2018

Attended university online while working full time to improve my opportunities

Course Highlights:

Software II - Advanced Java Course

Tasked with building my own data structures for Hash Map and Binary Search Tree. I couldn't use any of the existing classes within Java that support these functions. For HashMap, I converted the word into a number, based on Char methods. It then inserted, removed, and deleted the appropriate item based on the index number assigned to it, in the Hash search. To implement the Binary Tree, I created a base node class to represent the object, and then used the same numeric conversion to determine the proper sorting (left or right) in the binary tree.

Mobile Software Development – Android SDK (Java)

Tasked with building applications to keep track of progress in college courses. Requirements included, adding courses – sharing pictures (from camera or filesystem) and sending an email (sharing hooks in Android) to the Mentor. Used JetBrains Android Studio for project development.