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Brad Duvall

A new Software Engineer (formerly Materials Engineer with 6 years of industry experience) looking to join a Front End of Full Stack team as a junior developer.

Technical Qualifications

- Graduate Certificate in Software Design and Development from UW Bothell.
- Completed projects in JavaScript, VueJS, React, Firebase WS, C++, Python, and Java.
- As a Materials Engineer worked in multi-disciplinary, agile teams in aerospace manufacturing. Wrote documentation and specifications for manufacturing. Worked directly with customers to reduce cost and improve manufacturing methodologies.
- As a Nuclear Mechanic in the US Navy, supervised nuclear propulsion teams during wartime, ensured continuous operation of mission critical equipment and maintained safety protocols.

Software Projects

- **Brownie Points WebApp** Link (2018 - 2019)
  Designed and implemented a web app that allows users to track daily, weekly, and monthly goals, with a gamification twist. By completing the goals, the user gains experience points, levels up and earns rewards. Iterated through several versions: v1 in plain JavaScript, BootStrap, LocalStorage and deployed via Github Pages; v2 rewrite in VueJS and added Firebase authentication and NoSQL db; v3 (in progress) rewrite using React and Redux.
- **E-Commerce Website** Link (2019)
  (In Progress) Building a React e-commerce app utilizing Redux, Reselect, Router, Firebase NoSQL database and authentication. Deployed using GitHub Pages and adding Stripe payment processing functionality. App is part of the “Complete React Developer” course on Udemy.com.
- **Shadow-Boxing WebApp** Link (2018)
  Created a web app for vocalizing random kick-boxing combinations to help Muay Thai training. Used Bootstrap, CSS, HTML and JavaScript. Users have options to adjust timer length, combination length, frequency, and include pre-made combinations. Requested and incorporated feedback from three early users.

Education

University of Washington Bothell, WA [2017 - 2018]

- Graduate Certificate in Software Design and Development, GPA: 3.5/4.0
- CS fundamentals: data structures and algorithms, systems programming, and software engineering life cycle and modeling.

Class Projects, C++

- OOP Group Project: Worked with a partner to design and develop an inventory tracking system using BST for quick sorting and storage of media inventory. Used hash tables to store and quickly access customer data. Designed a class hierarchy to make the inventory extensible for many media types

and genres. Used hash tables to store and quickly access customer data. Used a manager class to manipulate inventory and customer objects.
- Multithreading, Sleeping Barber Problem: Transformed a single process, single thread sleeping barber problem code sample into a multiple thread, multiple barber simulation. Used pthreads and asynchronous communication to implement multiple barbers with no memory leaks and no deadlocks.

University of Washington Seattle, WA [2009 - 2011]
- Bachelor of Science Material Science and Engineering

Work Experience

B/E Aerospace ALCI Everett, WA [2015 - 2016]
Materials and Process Engineer
- Maintained and updated materials and process specifications with customer approvals.
- Wrote a repair manual for minor repairs of plastic and composite materials meeting internal and external (FAA and Boeing) requirements saving upwards of $50,000 per lavatory for B/E
- Led a team of engineers to replace a 3M hook and loop fire retardant product, on a short deadline, finding a suitable alternative which met FAA and customer requirements.

Exotic Metals Forming Company Kent, WA [2011 - 2015]
Research Engineer I, II
- Analyzed and tested new titanium and nickel alloys to determine applicability for new product development.
- Worked closely with suppliers to reduce cost, material weight, and boost ability to withstand increasing jet engine exhaust temperatures.
- Collaborated with Finite Element Analysis software firms to determine the capability of FEA modeling and simulation of forming welded joints.

Modumetal Inc. Seattle, WA [2010 - 2011]
Project Engineer Intern
- Discovered optimal surface treatment of steel substrates prior to Modumetal deposition which resulted in more robust process control.
- Provided electrochemical cell computer models for several modeling software vendors. Contributed to a key contract by modeling parts to predict electrodeposited coating thicknesses.

United States Navy Everett, WA [2000 - 2006]
Nuclear Machinist Mate PO2 (E-5)
- Supervised a team as lead enlisted supervisor, ensuring safe and continued operation of nuclear propulsion plant during war time operations such as “Operation Iraqi Freedom”.
- Confidential security clearance.