Richard Baird

rich@rbaird.me • GitHub • +801-913-0238
LinkedIn • Salt Lake City, UT, 84108

Embedded Engineer

Solutions-oriented and tech-savvy professional offering hands-on experience in software development with capacity to streamline hardware engineering functions. Well-versed in debugging and troubleshooting hardware malfunctions aimed at minimizing resolution time. Instrumental in interfacing with hardware systems, leveraging programming languages such as C, C++, and python. Demonstrated strong capacity to develop and implement control system standards, while maintaining and updating complex data. Ability to analyze systems data in support of incorporating changes to the hardware configuration. Skilled in boosting client satisfaction experience by providing customer-centric solutions. Highly creative and innovative individual possessing excellent communication, problem-solving, and decision-making skills with keen attention to detail.

Technical Proficiencies

C++ | Javascript | SQL | Python | Linux | Verilog | Elasticsearch | JSON | XML | API | Containers

Career Experience

University of Utah | Salt Lake City, UT **2021 – 2022**
Laboratory TA – ECE 3700/3710

Read lab requirements and prepare curriculum to instruct students on the correct way to design, simulate, and synthesize designs described in the requirements documents. Assist students in understanding the design documents and guide them in the process of writing the appropriate HDL code to realize them in physical form. Grade lab reports and final hardware designs.

- Increased available lab instruction time by 50% through pre-recording instruction and providing it to students ahead of scheduled lab time.
- Improved student learning outcomes by 20% by increasing TA availability and visibility using online queues, Discord servers, and meeting schedulers.

University of Utah in Assoc. with National Science Foundation | Salt Lake City, UT **2021 – Present**
Research Assistant

Design and test radio sensor network by utilizing commercial off-the-shelf microcontroller devices and sensors in collaboration with team members. Leverage various programming languages such as C, C++, and python to interface with hardware devices. Debug all hardware malfunctions, lowering resolution time by 80% by employing documentation, datasheets, and troubleshooting tools such as JTag debuggers and logic analyzers.

- Decreased engineer onboarding time by 40% through requirements analysis and formulation of technical documentation.
- Slashed project delivery time approximately threefold by efficiently optimizing progress and eliminating obstacles in close collaboration with project stakeholders.

Bittercreek Technology, Inc. | Salt Lake City, UT **2013 – 2022**
Full-Stack Software Engineer

Devise and deploy effective solutions to customers by utilizing modern software stacks, including HTML5, PHP, JavaScript, Ruby, Python, and Java. Engage in agile software development lifecycles and technical discussions during scrum meetings. Organize product reporting abilities by incorporating Elastic Search. Migrate stack to Docker containers and implemented CHEF deployment scripts to expedite product deployment speed by three times. Offer SAML federation service to enable single sign-on for customers, resulting in customer satisfaction.

- Overhauled self-service portal to provide more useful, configurable, and secure services to clients.
- Enhanced customer retention by twofold designing new product features based on client feedback.
- Improved developer satisfaction by developing SDKs in multiple languages to interface with existing software.
- Increased software adoption in client environments by over 30% through implementation of existing customer software.

Northrop Grumman | San Antonio, TX **2022 – 2022**
Mission Systems Intern

Devise, demonstrate, and document a method of platform agnostic software deployment across an air gap.

- Decreased potential deployment times by 80% by devising a method of bundling software into a “one-click” install package that can be reliably deployed in an air-gapped environment.
- Improved customer retention potential by an estimated 20% by removing the technical burden from the deployment team and increasing deployment success rates by a potential 70%.

Education

Bachelors of Science in Computer Engineering, 2023 (expected)
University of Utah | Salt Lake City, UT
GPA: 3.2

Associates of Science – General Studies, 2019
Salt Lake Community College, Salt Lake City, UT
GPA: 3.0

Affiliations

IEEE Student Branch Chair – University of Utah – Salt Lake City, UT

- Organized engagement activities, technical workshops, and networking events while successfully managing an active discord server of over 300 members.