Spencer Durrant

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EDUCATION

The University of Utah, *Salt Lake City, Utah* Dean's List every semester **GPA: 3.857**
B.S.: Electrical & Computer Engineering Lawrence D. Schroder Endowed Scholar **Graduating Dec 2021**
Relevant coursework:
Computer Org & Design Lab (Verilog), Computer Systems (C, x86-64), Software Practice I & II (C#,C++,SQL),
Digital System Design (Verilog), Data Structures (Java), Fund. of Circuits & Eng. Electronics,
OO Programming (C++, Java), CAD of Digital Circuits (Python), Embedded System Design (C)
Machine Learning (Python), Digital VLSI Design (Fall 2021)

SKILLS

Programming Languages: *C, C++, Javascript, Python, MATLAB, Java, C#, SQL, and HDL - Verilog & VHDL*
Programming Environments: *Emacs, Eclipse, VScode, Colab, Vivado and Quartus (hardware)*
Software Tech: *Github, Google cloud products, GDB, integration & unit testing, CI/CD, multithreading, microservices/containers, TCP networking, Linux/Mac/Windows, Splunk*

WORK EXPERIENCE

Software Engineer Intern | ***Walmart Global Tech***, *Remote* June 2021 – August 2021
- Designed and developed an Integration Test Suite for cloud projects, deployed through Walmart CI/CD onto cloud
- Collaborated with experienced software engineers remotely, presentations and demos to managers
- Used software: Google cloud products, GitHub, Splunk, Jira, Slack, Docker, Kubernetes, npm

Software Consultant | ***LightWorks Metrology***, *Salt Lake City, Utah* January 2020 – Present
- TCP networking, serial communication, data processing, physics/computational programming, and VCS by Github
- Program development for motion controllers, interferometers, and robust IO devices using MATLAB and C++
- Also developing GUIs to ease user interaction and a JSON file parser system linking IO between programs

Electrical Engineer Intern | ***Colmek,*** *Murray, Utah* January 2020 – August 2020
- Tested PCBAs using oscilloscopes, multimeters, frequency counters, spectrum analyzers, and waveform generators
- Debugged PCBAs through analysis of schematics or firmware code in C, collaborated with both electrical and software engineers, and probing the PCBAs to determine correct or failing functionality of individual components
- Wrote and reviewed technical documents, organized file systems and trained other interns in testing and debugging

Research Assistant | ***University of Utah Clinical Neuroscience Center***, *Salt Lake City, Utah* May 2019 – January 2020
- Developed MATLAB programs and GUIs for calibrating sensors and testing prosthetic hands
- Gave presentations, reports, solicited feedback and created presentable figures using Adobe Illustrator

PROJECT EXPERIENCE

ACID Integration Test Suite *Internship Project | Independent* June 2021 – August 2021
- Highly configurable and generalizable integration testing suite deployed onto Walmart cloud servers
- Written in Javascript, utilizing Node and Jest frameworks, Google cloud products and Splunk managed logging
- Tests automated to execute in CI/CD pipeline whenever an app within namespace is updated via git commit

RC16-bit Computer on FPGA *Coursework Project | Collaborative* August 2020 – December 2020
- Developed a RISC 16-bit computer on an FPGA from scratch in Verilog with support for peripherals
- Created a custom assembler in Python to facilitate programming the FPGA
- Programmed Pac-Man in assembly code, utilized VGA, and an Xbox controller connected through a Raspberry Pi

Measurement and Calibration Library *Work Project | Independent* January 2020 – September 2020
- Built MATLAB collection of programs for calibration and creating a 3D coordinate metrology system
- Utilized physical devices including: compactRIO by NI, USB data acquisition devices, and motion controllers