Nathan Donaldson
5119 West 8270 South, West Jordan, UT, 84081
(801)833-6605, nathan.donaldsondrum@gmail.com

COMPUTER SKILLS

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

Software: •IDE: Eclipse SDK • Microsoft Visual Studio • My SQL • 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 •Inthinc Pro400

WORK/EXPERIENCE

Orbcomm
341 Main St #300
Salt Lake City, UT 84111
Firmware Engineer / Software Developer
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.

Java
University of Utah

- Taught and then implemented classical algorithms including: sorting, searching, tree and graph traversal etc. as well as data structures such as: linked-lists, trees, graphs, hash tables, and heaps). Used these practices to complete extensive assignments.
- Designed, implemented, and tested a word suggestion program (such as Google) in pairs using the techniques of paired programming.
- Designed and implemented a mobile online Battleship game application for Android devices. The project included the usage of Firebase for a database, a pleasing UI to users, data integrity, and functionality. The UI included login screens, an available/completed game search list, the game itself, spectation, and replays of games.
- Taught and then implemented difficult algorithms including: Blended, Divide and Conquer, Depth and Breadth first Searches, Topological Sorts and Dag algorithms, Strongly Connected Components, Dijkstra's, Greedy Algorithms, Dynamic Programming, Linear Programming, and Reductions, etc.

Circuitry/Hardware
University of Utah

- Designed, evaluated, built, tested, and debugged electrical/computer engineering circuits using voltage and current sources, resistors and capacitors, op amps, and diodes.
- Designed (with a group) a processor that controlled an XYZ coordinate crane game using a NES controller; Implemented a VGA display as well. Used Java for our compiler, prebuilt motors, drivers, and parts for the crane, as well as some wood to mount it on.
- Designed and built a tilting marble board with the X and Y axis controlled by two motors. The motors were controlled by an STM32F0 Discovery Board gyroscope. The gyroscope communicated via SPI to one board, and then relayed the information to two other boards via USART. Those two boards used PI controllers to control motor drivers, which finally controlled the motors. All software written was done in C.

C# Programming
University of Utah

- Designed an Excel-like Spreadsheet program that had various solutions in it, including: A dependency graph for cell dependency, a formula and formula evaluator solution for calculations, a Spreadsheet solution which uses the previous listed to build, and finally a GUI for the application.
- Designed a 2-player boggle game client that connected to a server as well as implemented an SQL database that could be viewed via webpage (html).

C++ Programming
University of Utah

- Designed and created a sprite editor in Qt with a team of 4 other people. Editor had many features that are available today in many sprite editors.
- Designed and created an educational video game that taught basic physics to elementary school children in Qt with a team of 7 other people. Game allowed server login that used an SQL database as well as teacher specific logins to edit database(as an instructor might do using this product). Implemented SFML and box2d libraries as well. Json was used also for level design.

EDUCATION

Salt Lake Community College 2009-2011
Taylorsville, Utah

- 3.091 GPA

University of Utah 2011 -Current
Salt Lake City, Utah

- 2.9 current GPA; Bachelor in Computer Engineering in progress.

AVAILABILITY

- My availability will mostly be weekends and later in the evening during spring semester, I would really like to "aim" to get the project done in the summer or get a large chunk of it completed just to make sure that we are able to turn in a complete project in the fall. During the summer I will be working full time but will be available in the evenings and on weekends. During fall semester I will still be working but will probably have a more time during the week since I will only be taking one other class. I will also be available on weekends during the fall.
- I would say that I am stronger in the CS side of this program, but I do enjoy the EE side as well, just not as much. I am looking for partners who can fill the EE void that I may possess. I am also looking for partners who are open to ideas, don't get frustrated easily, and will put forth any time they have to work on this project during the course of the year (including the summer).