Trever Wagenhals

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EDUCATION

University of Massachusetts, Lowell — Anticipated Fall 2018

Accelerated Bachelor/Master of Science, Computer Engineering, Minor in Business Administration

Honors: Dean's List Spring 2014/2015 & Fall 2015, John and Abigail Adams Scholarship

GPA: 3.51

Relevant Coursework: *C Programming, Microprocessor System Design I/II, Logic Design, Electronic Materials, Electromagnetics I, Signals and Systems, Circuit Theory, Electronics I, Computer Hardware Architecture*

***Bachelor Credits Completed*: 114** ***Pending Credits Before Hire*: 6**

***Master Credits Completed*: 6** ***Pending Credits Before Hire*: 3**

TECHNICAL SKILLS

Applications: Visual Studio, LogicWorks, Diptrace, Office, Command Line, GIT, familiar with MATLAB

Programming and OS: C++, C, Python, Shell Scripting, Batch programming, exposure to VHDL

Equipment: Oscilloscope, function generator, AC/DC power supply, soldering, multimeter, schematic reading

Certifications: CompTIA A+, Network+, Security+, Fiber

PROFESSIONAL EXPERIENCE

94E (Radio and Comsec Repair) SPC-P*, *United States Army Reserves January 2013 – Present

- Developed the ability to work in teams to accomplish various tasks swiftly and efficiently
- Juggle responsibilities between working, attending school full time, and weekend drills
- Deployed to Kuwait, troubleshooting circuits in air conditioners, computers, vehicles, and generators.
- Created several scripts to automate computer updating process, saving time and resources
- While deployed, completed Minor in Business online and earned certificates in my free time

Research and Development Hardware Engineering Co-op, Teradyne February 2016 – June 2016

- Researched methods to enable hot-plugging for PCIe devices
- Enhanced my knowledge in computer architecture, communication protocols such as SMBus and GPIO, general Linux use, Command Line execution, EEPROM alterations, and programming in Python.
- Showed ability to independently research information and solve problems with little instruction
- Implemented design verification procedures to prepare final product for shipment

Product Advisor, Microsoft, Burlington, MA July 2015 – January 2016

- Applied computer skills, troubleshooting numerous programs and operating system related issues.
- Generated business leads that strengthened relationships with potential future partners of Microsoft

SUPPLEMENTARY EXPERIENCE

Cellular Signal Amplification System August 2016 – Present

- Designed a dual-yagi antenna system to amplify cellular reception inside a metal enclosure
- Cross-polarized the two antennae at ± 45° to ensure the greatest bandwidth allocation and lowest bit-error ratio by allowing cellphones to use multiple-input multiple-output communication to the tower
- Included two 70dB gain amplifiers specifically for the 1900MHz LTE frequency to further amplify the signal
- Allowed speed improvements up to 30mbps download from original 2mpbs download speeds

Microprocessors II and Embedded Systems, University of Massachusetts Lowell Spring 2016

- Programmed a microprocessor to control an LED based on varying ADC value through a photo-resistor
- Bit-banged the ADC value to a Galileo through GPIO programming and handshaking
- Created an I2C library to talk to a real time clock and read/write values to its registers
- Sent the data to a server when the handshake was acknowledged between the two devices
- Baked a custom Linux image with preloaded modules and created a custom driver to probe

Advanced Individual Training, United States Army Reserves, Secret Clearance March 2013 – August 2013

- Attended 22-week training course on radio repair and communications security
- Developed skills in understanding basic radio frequency communications, reading schematics, locating hardware malfunctions, soldering components, designing a functional multi-meter, and creating secure networks and keys to fill each radio with.