Madeline Stager

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EDUCATION

The University of Texas at Austin Expected Graduation Date: May 2018
Bachelor of Science in Computer Science GPA: 3.88

WORK EXPERIENCE

University of Texas at Austin, Austin, TX; **Teaching Assistant** August 2016 - Present

- Led weekly discussion sections for honors operating systems class
- Graded programs, quizzes and tests

Qualcomm, San Diego, CA; **Intern, Corporate R&D 5G Wireless Firmware** May 2016 – August 2016

- Developed simulator for the Digital Signal Processor (DSP) in C++ to test firmware
- Implemented over 40 DSP instructions and 10 special register and status methods
- Created testing framework for DSP simulator

National Instruments, Austin, TX; **Co-op, Instrument Drivers** June 2015 – December 2015

- Developed drivers in LabVIEW and designed APIs for a variety of instruments
- Implemented programmatic operations such as configuring, writing to, reading from, and triggering instruments
- Worked with Function Generator, PID Controller, Analog Filter, Low Noise Power Source, Signal Analyzer
- Utilized instrument unique command sets in API design and implementation, including SCPI command sets
- Comprehensively tested and documented drivers

Philmont Scout Ranch, Cimarron, NM; **Ranger** May 2014 – August 2014

- Educational guide and mentor to over 100 participants
- Guided and coached participants to help develop a high functioning, independent team

SKILLS

- Experience with Java, C, C++, Git, LabVIEW and Python
- Exposure to Verilog, X86-32 Assembly, Travis CI, Docker, JavaScript, HTML and CSS

PERSONAL PROJECTS

- **Seeing Eye Robot** - Built a robot that stays in front of you and warns you of obstacles for Hack Mobile
- **TIC-TAC-TOE Game -** Developed a GUI and algorithm to rate squares and choose the best move in Python
- **Arduino -** Made light show with a variety of patterns using Individually addressable RGB lights in C++

SCHOOL

Course Projects

- **Operating Systems**: Developed multi threaded OS, scheduler, system calls, virtual memory, file system, shell in C
- **Computer Architecture**: Designed RISC processor with pipelining in Verilog
- **Intro Computer Security**: Implemented Advanced Encryption Standard (AES) algorithm with 256-bit keys in Java
- **Data Structures**: Implemented Huffman Coding data compression algorithm in Java

Other Coursework

- Introduction to Probability and Statistics
- Discrete Mathematics
- Linear Algebra
- Creative Problem Solving

ACTIVITIES & AWARDS

- Qualcomm Hack Mobile Top 10 Finalist 2016
- National Center Women & IT Award for Aspirations in Computing – Central Texas Runner Up 2013
- Association for Computing Machinery UT Chapter Member 2014-Present
- UT Women in Computer Science Member 2014-Present
- Texas Women's Ultimate Frisbee 2014-Present