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: 3.86

WORK EXPERIENCE

VMware, Palo Alto, CA; **Intern, ESXi Kernel CPU Scheduling** — May 2017 - Aug. 20017

- Developed technique to estimate throughput gain due to hyper-threading online
- Studied hyper-threading performance, quantifying throughput and analyzing cause

University of Texas at Austin, Austin, TX; **Teaching Assistant** — Aug. 2016 - Dec. 2016

- Led discussion sections and graded programs for honors operating systems class

Qualcomm, San Diego, CA; **Intern, Corporate R&D 5G Wireless Firmware** — May 2016 - Aug. 2016

- Developed simulator for 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** — Jun. 2015 - Dec. 2015

- Developed drivers in LabVIEW and designed APIs for a variety of instruments
- Implemented programmatic operations such as configure, write, read, trigger
- Worked with Function Generator, PID Controller, Analog Filter, Signal Analyzer

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

- **Multicore OS**: memory management, spawn a process, bootstrap a core, inter-core communication, in **C**
- **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 256-bit keys in **Java**
- **Computational Semantics**: Research project studying the correlation of word sound and meaning using **Python**
- **Creative Problem Solving**: Case study on creative problem solving methods of Alan Turing

Other Coursework

- Algorithms and Complexity
- Introduction to Probability and Statistics
- Discrete Mathematics
- Linear Algebra
- Cyberphysical Systems
- Software Engineering
- Data Structures
- Competitive Programing

ACTIVITIES & AWARDS

- Qualcomm Hack Mobile Top 10 Finalist — 2016
- UT College Scholar — 2016-2017
- Association for Computing Machinery UT Chapter Member - Junior Officer 2016-2017 — 2014-Present
- UT Women in Computer Science Member — 2014-Present
- Texas Women's Ultimate Frisbee — 2014-Present
- Philmont Scout Ranch Staff, Ranger — 2014