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 2017

- Studied hyper-threading performance to improve scheduling decisions
- Developed technique to estimate throughput gain due to hyper-threading at runtime

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

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

- Teaching Assistant for honors operating systems class, CS439H
- Led discussion sections and graded programs

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, spawning a process, bootstrapping 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**
- **Software Engineering:** Created website with database and search functionality with team of 6 people

Other Coursework

- Algorithms and Complexity
- Introduction to Probability and Statistics
- Linear Algebra
- Cyberphysical Systems
- Competitive Programing
- Creative Problem Solving

ACTIVITIES & AWARDS

- UT College Scholar — 2016-2017
- Association for Computing Machinery (ACM) 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