

Madeline Stager

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EDUCATION

The University of Texas at Austin
Bachelor of Science in Computer Science

Expected Graduation Date: May 2018
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, Python and LabVIEW
- Exposure to Docker, Travis CI, Verilog, X86-32 Assembly

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

- Association for Computing Machinery (ACM) UT Chapter Member - Junior Officer 2016-2017 2014-Present
- Eva Stevenson Woods Endowed Presidential Scholarship 2017 -2018
- Junior Fellows: Interdisciplinary Undergraduate Research Forum 2017 - Present
- UT College Scholar Honors 2016-2017
- Texas Women's Ultimate Frisbee 2014-2016
- Philmont Scout Ranch Staff, Ranger 2014