Samantha Dreussi

(615) 513-7303 | samdreussi@me.com

Education

University of Washington *Seattle, WA* Sept. 2024
PhD in Computer Science and Engineering

Purdue University *West Lafayette, IN* Aug. 2020 – December 2023
BS in Computer Engineering

Experience

University of Washington *Seattle, WA* Sept. 2024 – Present
Teaching Assistant

- Lead recitation sections to help students understand course materials and answer questions
- Develop exam questions to test understanding and grade said questions while providing feedback
- Host office hours to help students one on one with their code and answer any questions they have about course materials

Intel Corporation *Austin, TX* June 2023 – Aug. 2023
Verification Intern

- Wrote unit tests validating the operation of instructions for an x86 processor using tools such as test generators
- Made program that decodes the test output for the CPUID and MSR instructions based of instruction specifications using regular expressions
- Created remote test runner let a user request for tests to be ran on a machine through Jenkins and them receive the test results once the test has completed using Python multi-threading and an artifactory

Projects

Golf Simulator | *C, Python* Aug. 2023 – Dec. 2023

- Developed a golf simulator consisting of two PCBs with a microcontroller, IMU, Bluetooth module, and power convertor on them inside a 3D printed golf ball with a team of 4
- Wrote code to communicate between the microcontroller and Bluetooth module on the PCB using UART and the code to communicate between the Bluetooth module and laptop and process the data received
- Researched and calculated necessary equations needed to transform IMU data into graphs of the ball's projected trajectory
- Ordered components for the design based off of necessary specifications and soldered the parts onto the PCB

Multicore Pipelined MIPS Processor | *System Verilog* Jan. 2023 – May 2023

- Worked in team of two to develop a multicore pipelined MIPS processor with caches in System Verilog
- Tested processor with ASM unit tests and System Verilog tests using QuestaSim to view the waveforms

Purdue SoCET Design Flow Project Jan. 2022 – May 2022

- Completed design flow process including synthesis and place and route for timer module in AFTx06 RISCV system on chip design

Research Experience

Paul G. Allen School of Computer Science and Engineering *Seattle, WA* Sept. 2024 – Present
Doctoral Researcher, Advisor: Mark Oskin

- Developed a simulator for a hardware work stealing task queue mechanism to determine the viability of the idea with a partner
- Researching the ability of LLMs to generate code for obscure algorithms with various techniques such as multithreaded, CUDA, and hardware accelerator implementations

Awards and Honors

McDonnell Douglas Diversity Scholarship Aug. 2023
Stephen J. Woods Memorial Scholarship Aug. 2023
Eli Shay ROTC Electrical Engineering Scholarship Aug. 2023
Purdue Presidential Scholarship Aug. 2020 - Dec. 2023