Ikechukwuka Ofili

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EDUCATION

Bachelor of Science Computer Engineering, Mathematics Minor **May, 2024**
The University of Texas at Arlington *Arlington, TX*
GPA: 3.61

SKILLS

Programming Languages: C, Java, C++, x86_64 and ARM assembly, Haskell, Verilog, SystemVerilog, Python, Rust, Kotlin, JavaScript, PHP, SQL, R, Common Lisp
Tools: Git, LaTeX, Java Swing, Vivado, Quartus Prime, Code Composer Studio, Android Studio, Linux, LTSpice
Hardware: Intel MAX10, Xilinx XUP Blackboard, Raspberry Pi 3, Arduino UNO, Tiva TM4C123GH6PM MCU

WORK EXPERIENCE

Homework In a Cafe **Flower Mound, TX**
Tutor *Oct 2023 – Dec 2023*

- Tutored high school and middle school students in Math, Physics, and Chemistry.
- Helped get a student from a D- to a C in Algebra and another from an F in Physics to a B.
- Hosted an average of 3 sessions a week while in college full-time.

University of Texas at Arlington **Arlington, TX**
CSE Undergraduate Teaching Assistant *Jan – May 2023*

- Oversaw the progress of 50+ students in an Algorithms and Data Structures class.
- Held office hours for 6 hours a week where I explained the class concepts to students.
- Hosted occasional mock interviews and application info-sessions for interested students.
- Introduced automated downloading of students' submissions to the class.
- Collaborated with co-TAs to develop the 1st ever grading suite for this class to reduce grading times.

PROJECTS

SoC Function Generator *Sep – Nov 2023*
https://github.com/ikeofilic1/WaveGen

- Designed and implemented a dual-channel function generator capable of generating DC output as well as, sine, triangle, square, and sawtooth waves of various frequencies, amplitudes, and phase offsets.
- Soldered a custom DAC circuit for use with a Xilinx XUP Blackboard as the implementation.
- Implemented Linux kernel modules and a simple application in Linux user-space to control the module

File system in C *May 2023*
https://github.com/ikeofilic1/mav-fs

- Led a team of 4 to build a command-line-interfaced index-allocated file system for a class project.
- Implemented commands such as `readfile`, which reads a file from disk into the file system, and `list`, which lists all the files in the file system.
- Wrote 5 commands out of 13 total, using Git VCS to collaborate with teammates.

Haptic Walking Aid *Mar – May 2023*
https://github.com/ikeofilic1/walking-aid

- Prototyped a walking stick with haptic feedback for collision detection.
- Provided an interface for users to program up to 16 personalized vibration patterns which are preserved after reboot.

Malloc Implementation *Apr 2023*
https://github.com/ikeofilic1/malloc

- Wrote a replacement for libc's malloc with support for best fit, first fit, worst fit, and next fit allocation algorithms.
- Built and deployed performance tests for all 4 memory allocation algorithms vs. libc's implementation.

FPGA Calculator *Sep – Dec 2022*

- Designed an 8-bit, 2-function calculator in Verilog to run on the terasic DE10-Lite FPGA board.
- Utilized a 4x4 keypad for input and 4 seven segment displays for the output.

AWARDS & HONORS

- Freshman Distinction Roll (4.0 GPA in first 30 hours) Spring 2020.
- Dean's List Spring 2022.
- Sabre Holdings' Outstanding Professional Computer Engineering Student Award Spring 2023.