

# Ikechukwuka Ofili

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## EDUCATION

**Bachelor of Science Computer Engineering, Mathematics Minor**

*The University of Texas at Arlington*

GPA: 3.61

**May, 2024**

*Arlington, TX*

## SKILLS

**Programming Languages:** C, Java, C++, x86\_64 and ARM assembly, Haskell, Verilog, SystemVerilog, Python, Bash, Rust, Kotlin, JavaScript, PHP, SQL, R, Common Lisp

**Tools:** Git, L<sup>A</sup>T<sub>E</sub>X, Java Swing, Vivado, Quartus Prime, Code Composer, Android Studio, Linux, LTSpice

**Hardware:** Intel MAX10, Xilinx XUP Blackboard, Raspberry Pi 3, Arduino UNO, Tiva TM4C123GH6PM

## WORK EXPERIENCE

**University of Texas at Arlington**

*CSE Undergraduate Teaching Assistant*

**Arlington, TX**

*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 1<sup>st</sup> 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.
- Sampled 3 ultrasonic sensors simultaneously, yielding vertical and horizontal field of views of 90 and 30 degrees respectively.

**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.