Abenezer Wudenhe

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EDUCATION

University of California, Riverside (UC Riverside)
PhD in Computer Science
Expected: May 2023

University of Maryland, Baltimore County (UMBC) Cum Laude
BS in Computer Engineering – VLSI & Comp. Security Track
May 2018

TECHNICAL SKILLS

Languages:	**C, C++, python**, html, MPI, php, Arduino IDE, CUDA, OpenMPI
Operating Systems:	Windows, Linux(Debian, Fedora, Ubuntu, Raspian OS)
Software Tools:	Xilinx Design Tool, MATLAB, Cadence's Allegro Design Entry CIS, Atmel Studio, Git, Virtual Box, LaTex, EAGLE, Autodesk, X11System

RESEARCH EXPERIENCE/EMPLOYMENT

TPU Research — 2019 Aug - Present
- Profile top operations of Google's Tensor Processing Unit (TPU)
- Design user tools to optimize TensorFlow code

ESCAL Research Lab assistant — 2018 Aug - Present
- Application acceleration through memory architecture
- Machine Learning Framework modification & profiling

University of Michigan Lab 4PROGRESS REU — 2017 May - Aug 2017
- Constructed a cluster computing network
- GPU accelerated image rendering

Electroencephalograph (EEG) Study on Image Formation — 2016 June - Aug 2016
- Organized data management from experiments
- Programed Matlab code for 3D graph plotting and analysis

High Performance Computing REU — 2015 May - Aug 2015
- Conducted performance test on "Maya" server cluster
- Showed results and recommendations to speed up servers

RELEVELNT PROJECTS

NVMW 2019 Poster; What Can Intelligent SSDs Do for machine Learning
- Profile Tensor Flow utilization of CPU, GPU, TPU
- Modify Tensor Flow codebase

VLSI Cache Design (Academic)
- Design, implement, and simulate in VHDL for a 32 byte cache
- Design the layout for the cache and ensure no design errors occur

Password Keeper Kernel Module(Academic)
- Write a Linux kernel module that creates and stores user passwords
- Implement module into a miscellaneous device compiled against 4.9 Linux source tree

Magic Smart Mirror (Extracurricular)
- Design and construct 3D printed modules for two way infinity mirror with a GUI
- Implement GUI using Google Calendar API, Raspberry pi, python, and Java

Arduino Workshop (Extracurricular)
- Design introductory course on microcontrollers and embedded systems
- Instruct students on how to utilize PWM, ADC, Servos, and analyze circuits