Abenezer Wudenhe

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EDUCATION

University of California, Riverside (UCR)   PhD (Computer Science)
- SMART Fellow   September 2024
- Chancellor's Distinguished Fellow   GPA: 3.9
- GAANN Fellow

University of Maryland, Baltimore County (UMBC)   BS (Computer Engineering)
- Meyerhoff Scholar   May 2018 (Cum Laude)
- NSA Scholar

PROFESSIONAL EXPERIENCE

Extreme Storage and Computer Architecture Lab (ESCAL)   **Aug 2018 – Sep 2024**
Graduate research assistant to Dr. Hung-Wei Tseng.

PROJECT: *Accel-Bench: A Benchmark Suite toward the Future of Accelerator-Intensive Programming*
- Designed benchmark suite; 10+ apps (genomics, AI/ML, etc.), GPU simulator (Accel-Sim).
- Opensource repo & pending publication in major measurement conference.
- Achieved speedup of 1.69x to 2.34x on GPUs from baseline.

PROJECT: *TPUPoint: Profiler and optimizer for TPU cloud*
- Developed an automatic profiling and optimization tool for Google's TPU-based.
- Opensource repo & Publication in ISPASS.
- Achieved up to 1.12x speedup for programmer's optimizations using TensorFlow.

Google Software Engineering Intern   **June 2023 – Sep 2023**
SWE Intern under Dr. Jaswanth Sreeram (XLA Compiler Team)
- Engineered Low Level Instruction analysis tool for Google XLA Compiler team usage
- Currently utilized by team of 15+ senior compiler engineers across XLA & Tensorflow team.

Google Software Engineering Intern   **June 2022 – Sep 2022**
SWE Intern under Dr. Ayub Gubran (Pixel gChip Team)
- Established System Verilog based tools for architects to utilize in debugging/analysis of SoCs files.
- Isolated 5+ previously unidentified SoC interrupt error sources.

Intel OneAPI Graduate Student Software Internship   **Oct 2021 – Feb 2022**
SWE Research Intern under Dr. Hongbo Rong
- Extend compiler infrastructure to generate OneAPI C++ code for CPU, GPU, and FPGA.
- Present Temporal to Spatial Programming (T2SP) at the 10th IWOCL Conference.
- Oversee handoff of project to following Intern.

TECHNICAL SKILLS

- Experience programming in **C, C++, python**, **CUDA**, CMake, TensorFlow, Javascript, NodeJS
- Experience writing technical documents & presentations using **LaTex, Word, PowerPoint, Keynote**

SELECT COURSES

- (UMBC) CMPE 311: C Programming & Embedded Systems
- (UMBC) CMSC 421: Principles of Operating Systems
- (UMBC) CMSC 471: Artificial Intelligence
- (UMBC) CMSC 491: Special Topics in Computer Science: Computer Vision
- (UCR) CS 203: Advanced Computer Architecture
- (UCR) CS 217: GPU Architecture
- (UCR) CS 225: Spatial Computing
- (UCR) CS 213: Multiprocessor Architecture & Programming