

# Abenezer Wudenhe

 [awude001@ucr.edu](mailto:awude001@ucr.edu) |  <https://abe157.github.io/> |  [Google Scholar](#)

## EDUCATION

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| <b>University of California, Riverside (UCR)</b> <ul style="list-style-type: none"><li>• SMART Fellow</li><li>• Chancellor's Distinguished Fellow</li><li>• GAANN Fellow</li></ul> | PhD (Computer Science)<br>Expected: May 2024               |
| <b>University of Maryland, Baltimore County (UMBC)</b> <ul style="list-style-type: none"><li>• Meyerhoff Scholar</li><li>• NSA Scholar</li></ul>                                   | BS (Computer Engineering)<br>May 2018 ( <u>Cum Laude</u> ) |

## PROFESSIONAL EXPERIENCE

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| <b>Google Software Engineering Intern</b><br><i>Software Engineering Intern under Dr. Ayub Gubran</i> <ul style="list-style-type: none"><li>• Participate in a 12-week internship program for the Google gChips Architecture Team.</li><li>• Developed System Verilog based tools for architects to utilize in debugging/analysis of SoCs files.</li><li>• Participated in Google Intern Mentorship Program during weeks 5 - 12.</li></ul>   | Jun. 2022 – Sep 2022 |
| <b>Intel OneAPI Graduate Student Software Internship</b><br><i>Software Engineering Research Intern</i> <ul style="list-style-type: none"><li>• Participate in a 3 month internship to extend existing research project to Intel OneAPI.</li><li>• Extend existing compiler infrastructure to produce Data Parallel C++ device code to run on CPU, GPU, and FPGA.</li></ul>  | Oct 2021 – Feb 2022  |
| <b>Extreme Storage and Computer Architecture Lab (ESCAL)</b><br><i>Graduate research assistant to Dr. Hung-Wei Tseng.</i> <ul style="list-style-type: none"><li>• <i>TPUPoint: Profiler and optimizer for TPU cloud</i><ul style="list-style-type: none"><li>○ Designed and developed an automatic profiling and optimization tool for Google's TPU-based ML Cloud Platform.</li><li>○ Achieved up to 1.12x speedup for programmer's optimizations using TensorFlow.</li><li>○ Ported a set of MLPerf applications to Google's TPU Cloud Platform.</li></ul></li></ul> | 2018 Aug – Present   |
| <b>ARMY CYBER DWD Internship</b><br><i>Software Engineering Intern.</i> <ul style="list-style-type: none"><li>• Assessed new technologies for ARMY Big Data Platform.</li><li>• Explored Amazon Kinesis tool for data stream processing for reduction of database overhead.</li></ul>  | 2019 May – Aug 2019  |

## PUBLICATION

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**A. Wudenhe**, Hung-Wei Tseng. "TPUPoint: Automatically Characterizing Hardware Accelerated Data Center Machine Learning Program Behavior". In IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS 2021), 2021.

Q. Meng, D. Gupta, **A. Wudenhe**, X. Du, L. Hong, F. Choa. "Three-Dimensional EEG Signal Tracking for Reproducible Monitoring of Self-Contemplating Imagination". In Advances in Science, Technology and Engineering Systems Journal (ASTESJ), 2017.

## TECHNICAL SKILLS

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- Experience programming in **C**, **C++**, **python**, **CUDA**, html, MPI, php, Arduino, OpenMP, Open MPI, TensorFlow, Sklearn, Javascript, NodeJS
  - Experience writing technical documents using LaTeX, BibTex, Word
  - Experience with Xilinx Design Tool, MATLAB, Cadence's Allegro Design Entry CIS, Atmel Studio