Kingsley Chukwu, PhD

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Hillsboro, OR 97124, USA.

SUMMARY

I'm a Staff EDA Tools Software Engineer at Intel Corporation, where I work on programming standard design rules in ICV and Calibre, automating workflow in Linux, develop and implement Runset Testcase Generator (RTG) testcase for ICV runset codes, coding and debugging LVS runset.
Additionally, I am a part-time GPU Software Engineer (CUDA/C++), in which I write CUDA kernels for deep learning application, profiling CUDA kernels using Nsight Systems and Nsight Compute to identify areas of optimization.

EXPERIENCE

Self-Employed *Mar. 2025 - present*

Part-time GPU Software Engineer (CUDA), **Hillsboro, OR**

- Worked on optimizing CUDA Kernel implementation for Euclidean Distance Matrix.
- CUDA Kernel implementation of a single forward and backward propagation for a three-layer neural network.

Intel Corporation *Oct. 2021 - present*

Staff EDA Tools Software Engineer | Jul. 2025 - present **Hillsboro, OR**

EDA Tools Software Engineer | Oct. 2021 – Jun. 2025 **Hillsboro, OR**

- Runset codes release, programming of design rules and software integration for quantum chip PDK software.
- Programming standard design rules in ICV (like C/C++) and Tcl Software in an objected-oriented way to optimize modularity and re-usability.
- Automation of workflow in Linux Operating System using Python, Tcl or Perl.
- Support PDK development and Intel design teams to debug and enhance Runset quality and enhance runtime.
- Research and collaborate with design, layout and/or hardware engineers in the design, development, and utilization of productivity enhancement layout tools and design rule checkers.
- Programming RTG (Runset Testcase generator) testcases in Tcl for Runset codes.

Berkeley Lab Computing Science (LBNL) *Jun. 2019 – Aug. 2019*

Research Fellow (Computational Scientist), **Berkeley, CA**

- Explored and tested machine learning as a tool to accelerate simulations of chemical reaction on surfaces with solvent molecules. The machine learning was implemented with Scikit Learn.
- Implementation of Ab-initio molecular dynamics (AIMD) and accelerating techniques to determine energy barriers for chemical reactions on solid surfaces.

EDUCATION

Oregon State University *Sept. 2024 – Jun. 2025*

M. Eng in Computer Science **Corvallis, OR**

Oregon State University *Sept. 2016 – Jun. 2021*

Ph.D. in Chemical Engineering (Computational Chemistry)

Ph.D. Minor in Computer Science **Corvallis, OR**

SKILLS

- **Programming Languages:** C++/C, Python, CUDA, Bash, Perl, Tcl.
- **Packages:** NumPy, PyTorch, scikitLearn.
- **General Tools and Platform:** Linux/Unix, High Performance Computing (HPC).
- **Artificial and Machine Learning:** Expertise in Deep Learning.

HONORS AND AWARDS

- Sustainable Research Pathway Program student fellowship at Berkeley National lab. *2019*
- AVS (American Vacuum Society) HC Registration Award. *2019*
- Oregon State University Graduate Laurels Scholarship. *2017*
- Certificate of merit from National Mathematical Centre, Abuja, Nigeria. *2004*
- Certificate of Recognition in Cowbell National Secondary School Mathematics Competition. *2003*
- Certificate of merit from National Mathematical Centre, Abuja, Nigeria. *2000*