Huy Dinh Tran

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EDUCATION

University of Kansas 08/2023 — Present
Ph.D Computer Science
Advisor: Prof. Mohammad Alian (Cornell University)

University of California, Riverside 09/2021 — 03/2023
M.S. Computer Engineering
Advisor: Prof. Daniel Wong

Pennsylvania State University 08/2017 — 05/2021
B.S. Electrical Engineering

EXPERIENCE

University of Kansas Lawrence, KS
Graduate Teaching Assistant 08/2024 — Present

- Assisted in teaching, grading, and providing feedback for Software Engineering II (EECS 581)
- Supervised and offered mentorship to 7 senior undergraduate teams on complex design projects
- Conducted weekly meetings to provide guidance, resolve challenges, and ensure project success

Graduate Research Assistant 08/2023 — 08/2024

- Researched processor microarchitecture designs aimed at improving datacenter performance and efficiency
- Developed custom applications and microbenchmarks for thorough evaluation of architectural designs
- Implemented new features in a full-system simulator to support research experiments

Futurewei Technologies San Jose, CA
Research Intern 08/2022 — 09/2022

- Simulated RISC-V CPUs in Linux Full-System simulation mode using gem5
- Cross-compiled binaries of SPEC CPU 2017 benchmarks to RISC-V for measuring the performance of CPU designs
- Integrated SimPoint to create checkpoints at ROIs for speeding up the simulation while still representing the workloads

PUBLICATIONS

- Amin Mamandipoor, **Huy Dinh Tran**, Mohammad Alian, *"SDT: Cutting Datacenter Tax Through Simultaneous Data-Delivery Threads"* (Under Review, ISCA 2025)

PROJECTS

Building custom GPU power models with AccelWattch Spring 2022 — Spring 2023
Implemented a GPU power model using AccelWattch; profiled GPUs to analyze power usage and performance counters; simulated benchmarks on GPGPU-Sim, achieved an average MAPE of 63.42% between simulated and real power data

Sparse matrix-vector multiplication (SpMV) Fall 2022
Developed sequential and parallel Sparse Matrix-Vector Multiplication in C with OpenMP; converted matrix formats from COO to CSR and CSC; achieved 3.93x speedup using 8 threads

Soccer matches prediction Spring 2022
Implemented multiple ML classification models in Python using scikit-learn and from scratch using NumPy and Pandas; achieved prediction accuracy of 81.25% using K-Nearest Neighbors

SKILLS

Language: C/C++, Python, Bash, LaTeX, MATLAB
Software & Tools: Git, gem5, Intel VTune, Intel CAT, GDB, Docker, OpenMP, GPGPU-Sim