Evan Williams

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Education

Cornell University, College of Engineering — Ithaca, NY
Master of Engineering in Computer Science — *January 2024 – May 2024*
- **Advisor**: Adrian Sampson | **Project**: Compiling PyTorch Models to Hardware Accelerators

Cornell University, College of Engineering — Ithaca, NY
Bachelor of Science in Computer Science, Electrical and Computer Engineering — *August 2021 – December 2023*

Purdue University, College of Engineering — West Lafayette, IN
Bachelor of Science in Computer Engineering – Transferred — *August 2020 – August 2021*
- **Activities and Societies**: Purdue Duality Lab, Purdue Engineering Student Council, ECE Ambassadors

Research Experience

Stanford University — December 2025 - Present
Collaborating Researcher, Advised by Olivia Hsu (CMU) — *Stanford, CA*
- Early-stage exploration of programming by navigation for interactive schedules in FuseFlow compiler for PyTorch

Cornell Computer Systems Lab — January 2022 – August 2024
Undergraduate Research Assistant, Capra Research Group — *Ithaca, NY*
- Designed compiler for a feed-forward neural network in PyTorch directly to FPGA-executable Verilog design
- Added support to Calyx for floating-point arithmetic and wrote optimization passes for MLIR and CIRCT IRs
- Built a pangenomic graph query accelerator for node-depth algorithm and presented findings to research group

Purdue Duality Lab — September 2020 – May 2021
Undergraduate Research Assistant — *West Lafayette, IN*
- Analyzed domain-specific regular expressions for DFA complexity, portability, and presence of back references
- Built prototype search-engine over millions of regexes to enable identification and reuse of secure patterns
- Implemented ranking scheme to cluster groups of regexes using metrics such as F-Score and mistake rate

Professional and Leadership Experience

Amazon Web Services — August 2024 – Present
Software Development Engineer, Amazon HealthOmics — *Mountain View, CA*
- Delivered lazy loading to download outputs from call cache for WDL engine yielding 11% speedup on workflows
- Expanded support for CUDA driver integration and implemented type coercion to enable more customer use cases
- Led knowledge sessions teaching engineers about Rust and wrote onboarding materials for new team members

Cornell Bowers College of Computing and Information Science — May 2023 – August 2024
Course Developer — *Ithaca, NY*
- Created assignments, lesson materials, and infrastructure for re-design of Cornell's core systems course, CS 3410
- Implemented optimized MNIST classifier in C and profiled performance using Intel TopDown for new project
- Designed assignments and created tooling for graduate computer architecture and systems course, ECE 5755

Cornell Data Science Project Team — February 2022 – May 2024
President — *Ithaca, NY*
- Directed team of 70+ members in ideation and implementation of machine-learning applications and research
- Secured over 15k in corporate sponsorships and launched partnership projects with companies in industry
- Led implementation of facial recognition system with distributed inference and federated learning on edge devices

Amazon Web Services — May 2023 – August 2023
Software Development Engineer Intern, AWS IoT RoboRunner — *Sunnyvale, CA*
- Developed application to perform deep packet inspection on MQTT network traffic using C++ and Docker
- Integrated with Amazon CloudWatch and AWS DeviceDefender to alert customers of anomalous behavior
- Deployed to AWS SnowDrop container for health monitoring and forwarding of detected anomalies to S3 bucket

Deloitte Consulting LLP — June 2022 – August 2022
Solutions Engineering Summer Scholar — *New York, NY*
- Produced designs and test plans for mobile app to track power outages and implemented backend and REST APIs

Publications

Jiahan Xie, **Evan Williams**, Adrian Sampson. "From PyTorch to Calyx: An Open-Source Compiler Toolchain for ML Accelerators". (**In Submission**) *Compilers for Machine Learning (C4ML) Workshop at the International Symposium on Code Generation and Optimization (CGO) 2026.*

Teaching Experience

CS 3110: Data Structures and Functional Programming — Spring 2022, Spring 2024
Cornell University — *Teaching Assistant*

ECE 4750/CS 4420: Computer Architecture — Fall 2023
Cornell University — *Teaching Assistant*

CS 4820: Intro to Analysis of Algorithms — Fall 2022, Spring 2023
Cornell University — *Teaching Assistant*

CS 159: C Programming — Spring 2021
Purdue University — *Teaching Assistant*

Honors, Awards, and Fellowships

- NSF CSGrad4US Fellowship (August 2025): **$159,000** over 3 years to support PhD studies
- Cum Laude, Cornell University (December 2023)
- Outstanding Undergraduate Course Staff, Cornell CIS (May 2022 - December 2023)
- Dean's List, Cornell Engineering (August 2021 - December 2023)
- Undergrad Architecture Mentoring Workshop (uArch) Attendee at ISCA 2022 (June 2022)
- Victor H. and Helen T. Green ECE Scholarship, Purdue ECE (May 2021)