Evan Williams

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Education

Carnegie Mellon University — *Expected May 2032*
Doctor of Philosophy in Electrical and Computer Engineering — Pittsburgh, PA

Cornell University — *May 2024*
Master of Engineering in Computer Science — Ithaca, NY

- Advisor: Adrian Sampson

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

Research Experience

- **Stanford University/University of California, Berkeley** — *December 2025 – Present*
  Independent Researcher — Stanford, CA
  - Developing an interactive synthesis system to schedule a compiler from PyTorch to sparse accelerators [1]
  - Advised by Rubens Lacouture, Justin Lubin, and Olivia Hsu

- **Cornell Computer Systems Lab** — *January 2022 – May 2024*
  Undergraduate Researcher, Capra Research Group — Ithaca, NY
  - Designed compiler from PyTorch to FPGA-executable Verilog with parallel banking optimizations [2] [3]
  - Implemented accelerated pangenomic graph queries using Dahlia, a hardware generation language

- **Purdue Duality Lab** — *September 2020 – May 2021*
  Undergraduate Researcher — West Lafayette, IN
  - Analyzed domain-specific regular expressions for DFA complexity, portability, and back references
  - Implemented ranking scheme to cluster groups of regexes using metrics such as F-Score and mistake rate

Publications

Refereed Workshop Papers

[1] **Evan Williams**, Justin Lubin, Rubens Lacouture, and Olivia Hsu. *Interactive Compiler Scheduling with Strong Guarantees*. Workshop on Languages, Tools, and Techniques for Accelerator Design (LATTE) co-located with ASPLOS. 2026.

[2] Jiahan Xie, **Evan Williams**, and Adrian Sampson. *From PyTorch to Cayx: An Open-Source Compiler Toolchain for ML Accelerators*. Workshop on Compilers for Machine Learning (C4ML) co-located with CGO. 2026.

[3] Jiahan Xie, **Evan Williams**, and Adrian Sampson. *From PyTorch to Cayx: An Open-Source Compiler Toolchain for ML Accelerators*. Workshop on Accelerated Machine Learning (AccML) co-located with HiPEAC. 2026.

Teaching Experience

- **CS 3410: Computer System Organization and Programming** — *Summer 2024*
  Course Developer — Cornell University
- **CS 3110: Data Structures and Functional programming** — *Spring 2022, Spring 2024*
  Teaching Assistant — Cornell University
- **ECE 4750/CS 4420: Computer Architecture** — *Fall 2023*
  Teaching Assistant — Cornell University
- **ECE 5755: Modern Computer Systems and Architecture** — *Summer 2023*
  Course Developer — Cornell Tech
- **CS 4820: Intro to Analysis of Algorithms** — *Fall 2022, Spring 2023*
  Teaching Assistant — Cornell University
- **CS 159: C Programming** — *Spring 2021*
  Teaching Assistant — Purdue University

Honors and Awards

- **Computer and Information Science and Engineering Graduate Fellowship (CSGrad4US)** *2025*
  National Science Foundation (NSF)
- **Cum Laude** *2023*
  Cornell University
- **Dean's List** *2021, 2022, 2023*
  Cornell University
- **Outstanding Undergraduate Course Staff** *2022, 2023, 2024*
  Cornell University College of Computing and Information Science (CIS)
- **Victor H. and Helen T. Green ECE Scholarship** *2021*
  Purdue University School of Electrical and Computer Engineering (ECE)

Work Experience

- **Amazon Web Services** *August 2024 – April 2026*
  Software Development Engineer, Amazon HealthOmics Mountain View, CA
  ◦ Led effort to support CUDA driver integration and implemented type coercion to enable new customer workloads
  ◦ Parallelized integration test execution to reduce time for production deployments in CI/CD pipeline by 50%
- **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
- **Deloitte Consulting** *June 2022 – August 2022*
  Solutions Engineer Intern New York, NY
  ◦ Conducted research and drafted design documentation for mobile application to assist crews in electrical outages
  ◦ Composed Python scripts to automate SQL database queries and connected to live front-end using a REST API
- **Commonwealth Associates** *May 2021 – August 2021*
  Electrical Engineering Intern Jackson, MI
  ◦ Designed alarm modules and relay circuits for electrical substations to improve power and energy efficiency
  ◦ Designed mobile application for internal employees to express feedback and ideas to upper-level management

Talks

- **Compiler Infrastructures for Hardware Accelerator Design**
  Google April 2026
- **Frontend Accelerators for Pangenomic Graph Queries**
  NSF PPoS Panorama Meeting for Computational Genomics May 2022