

Evan Williams

✉ +1 (571) 377-9544 | 📧 evanw0405@gmail.com | 💬 evanwilliams02 | 💬 evanmwilliams | 🌐 evanmwilliams.github.io

EDUCATION

Cornell University, College of Engineering <i>Master of Engineering in Computer Science</i>	Ithaca, NY January 2024 - May 2024
• Advisor: Adrian Sampson Project: Compiling PyTorch Models to Hardware Accelerators	
Cornell University, College of Engineering <i>Bachelor of Science in Computer Science, Electrical and Computer Engineering</i>	Ithaca, NY August 2021 - December 2023

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

PROFESSIONAL EXPERIENCE

Amazon Web Services <i>Software Development Engineer, Amazon HealthOmics</i>	August 2024 – Present 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	
Amazon Web Services <i>Software Development Engineer Intern, AWS IoT RoboRunner</i>	May 2023 – August 2023 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 <i>Solutions Engineering Summer Scholar</i>	June 2022 – August 2022 New York, NY
• Produced designs and test plans for mobile app to track power outages and implemented backend and REST APIs	

RESEARCH AND LEADERSHIP EXPERIENCE

Cornell Computer Systems Lab <i>Undergraduate Research Assistant, Capra Research Group</i>	January 2022 – August 2024 Ithaca, NY
• Implemented 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	
• Improved Calyx external dependency management by integrating Morty, a SystemVerilog source file picker	
• Built a pan genomic graph query accelerator for node-depth algorithm and presented findings to research group	
Cornell Bowers College of Computing and Information Science <i>Course Developer</i>	May 2023 – August 2024 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 assignment	
• Designed assignments and created tooling for graduate computer architecture and systems course, ECE 5755	
Cornell Data Science Project Team <i>President</i>	February 2022 – May 2024 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	
Purdue Duality Lab <i>Undergraduate Research Assistant</i>	September 2020 - May 2021 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	

TEACHING EXPERIENCE

CS 3110: Functional Programming and Data Structures	Spring 2022, Spring 2024
<i>Cornell University</i>	<i>Teaching Assistant</i>
ECE 4750/CS 4420: Computer Architecture	Fall 2023
<i>Cornell University</i>	<i>Teaching Assistant</i>
CS 4820: Intro to Analysis of Algorithms	Fall 2022, Spring 2023
<i>Cornell University</i>	<i>Teaching Assistant</i>
CS 159: C Programming	Spring 2021
<i>Purdue University</i>	<i>Teaching Assistant</i>

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)