

ERNEST NG

ernest@cs.cornell.edu | ngernest.github.io | github.com/ngernest

EDUCATION

Cornell University

PhD in Computer Science

2024 - Present

University of Pennsylvania

MSE in Computer Science

2022 - 2023

BA in Computer Science & Mathematics (*summa cum laude*)

2018 - 2022

RESEARCH EXPERIENCE

Cornell University

August 2024 - Present

Graduate Research Assistant

- Developing a domain-specific language for specifying the cycle-level behavior of hardware modules and identifying high-level transactions from waveforms
- Advised by Prof. Adrian Sampson and Dr. Kevin Laeuffer

University of Pennsylvania

December 2022 - August 2024

Graduate Researcher

- Developed [Mica](#), an OCaml compiler extension that automates differential testing of OCaml modules
 - Received Second Prize at the ICFP 2023 Student Research Competition ([poster](#))
 - Presented [paper](#) at the OCaml Users and Developers Workshop, co-located with ICFP 2024
 - Advised by Profs. Benjamin Pierce and Harrison Goldstein

INDUSTRY EXPERIENCE

Amazon Web Services

May 2025 - August 2025

Applied Scientist Intern

Boston, MA

- Developed [CHAMELEAN](#), a property-based testing framework for Lean that compiles user-supplied inductive relations into random generators and semi-decision procedures
- Advised by Prof. Mike Hicks and Dr. Cody Roux

Perpay Inc.

August 2023 - August 2024

Data Engineer

Philadelphia, PA

- Constructed ETL pipelines for handling transaction data using Apache Airflow, AWS Redshift and Python

TEACHING EXPERIENCE

Cornell University

Teaching Assistant

- CS 3410: Computer Systems

Fall 2025

University of Pennsylvania

Teaching Assistant

- CIS 3800: Operating Systems
- [Software Foundations](#) Rocq course (Penn Programming Languages REU)
- CIS 1940: Introduction to Haskell
- CIS 5450: Big Data Analytics (Head Teaching Assistant)
- CIS 2400: Computer Systems
- CIS 5500: Databases

Fall 2023

Summer 2023

Spring 2023

Spring - Fall 2022

Fall 2022

Summer 2022

ACADEMIC ACTIVITIES AND SERVICE

- SIGPLAN AV Student Volunteer (ICFP 2023 / 2024, POPL 2024)
- Cornell Student-Applicant Support Program
- Cornell, Maryland, Max Planck Pre-Doctoral Research School (CMMRS) Travel Award
- Oregon Programming Languages Summer School (OPLSS) Fellowship Grant

2023 - 2024

Fall 2024

August 2023

June 2023