Eric Hayden Campbell

https://ericthewry.github.io

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EDUCATION

CORNELL UNIVERSITY
Ph.D. in Computer Science
Expected May 2022 | Ithaca, NY
M.Sc. in Computer Science
Expected May 2019 | Ithaca, NY
Conc. in Programming Languages

POMONA COLLEGE
B.A. in Computer Science
B.A. in Mathematics
Graduated May 2017 | Claremont, CA
Conc. in Programming Languages

INTERNATIONAL SCHOOL OF AMSTERDAM
International Baccalaureate
Graduated May 2013 | Amsterdam, The Netherlands
Conc. in Mathematics

LINKS

Github:// **ericthewry**
LinkedIn:// **ericcampbell**
StackOverflow:// **ericthewry**

COURSEWORK

GRADUATE
Kleene Algebra • Category Theory • Advanced Programming Languages • Network Programming Languages • Advanced Systems

UNDERGRADUATE
Software Foundations (Coq) • Programming Languages • Senior Seminar (Security, Programmig Languages, & Ethics) • Computability & Logic

SKILLS

PROGRAMMING
Over 5000 lines:
Haskell • C++ • Coq • Java • Python • Ruby on Rails • LaTeX
Over 1000 lines:
OCaml • R • SQL • Java • bash
Familiar:
Elm • C • HTML/CSS • OCaml

FOREIGN LANGUAGE
Professional French • Survival Dutch

INDUSTRY EXPERIENCE

FUJITSU LABORATORIES OF AMERICA | Research Intern
May 2018 - Aug 2018 | Sunnyvale, CA
- Developed time-based procedure for detecting anomalies in networks.
- Analyzed synthetic topologies running GoBGP configurations.
- Detected a bug in GoBGP

ORIGINATE | Software Engineering Intern
May 2015 – Aug 2015 | San Francisco, CA
- Developed Massive multi-user Ruby on Rails & Coffeescript applications.
- Won Nation-wide intern hackathon.

SELECTED PUBLICATIONS

HOW TO AVOID MAKING A BILLION-DOLLAR MISTAKE: TYPE-SAFE DATA PLANE PROGRAMMING WITH SAFEP4
Matthias Eicholtz, Eric Campbell, Nate Foster, Guido Salvaneschi, Mira Mezini
ECOOP|July 2019
Develop a Type System for P4 that prohibits references to invalid headers. Surveys open source programs to identify real-world bugs that our type system prevents

INJECTING FINITENESS TO PROVE FINITE LINEAR TEMPORAL LOGIC COMPLETE Eric Campbell, Michael Greenberg
In Progress
Present Sound and Complete axioms for Finite-Trace Linear Temporal Logic (LTLf)

KLEENE ALGEBRA MODULO THEORIES Ryan Beckett, Eric Campbell, and Michael Greenberg
In Progress
Generate Soundness proofs, Completeness proofs, and Decision procedures for KAs plus a Sound, Complete and Decidable, client theory.

CONSTRUCTING INTEGER MATRICES WITH INTEGER EIGENVALUES Christopher Towse and Eric Campbell
The Mathematical Scientist, UK|June 2016
Developed a construction algorithm for Integer Matrices with Integer Eigenvalues (IMIEs). Created a web app to create an IMIE from an arbitrary input matrix.

PROJECTS

DATABASES @ POMONA COLLEGE | Research Assistant
Jan 2016 – Aug 2016| Claremont, CA
Worked with Professor Melanie Wu on the development of QuickTSI, a fast query system for finding (partial) subgraph isomorphisms on temporal graphs.

TEACHING

Term	Role	Course	Institution
Spring 2018	TA	OOP and Data Structures	Cornell University
Fall 2017	TA	OOP and Data Structures	Cornell University
Spring 2017	TA	Database Systems	Pomona College
Fall 2016	TA	Programming Languages	Pomona College
Spring 2016	Head TA	Intro to CS	Pomona College
Fall 2015	TA	Intro to CS	Pomona College