

Eric Hayden Campbell

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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:// [erichewry](#)
LinkedIn:// [ericcampbell](#)
StackOverflow:// [erichewry](#)

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

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|-------------|---------|-------------------------|--------------------|
| 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 |