Evan Hubinger

Contact Information

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Education

Harvey Mudd College, Claremont, CA — Expected Graduation: May 2019
B.S. in Mathematics and Computer Science — GPA: 3.856 (Dean's List)

The College Preparatory School, Oakland, CA — Graduated: May 2015

Programming Languages

Expert	**Proficient**	**Knowledgeable**
`Python, Coconut`	`Go, JavaScript, C++, Haskell, Cython`	`R, Java, MATLAB, Mathematica`

Summary

Four summers of professional software engineering experience at Google, Yelp, and Ripple. Author of Undebt and the Coconut programming language, which together have over 2,500 stars on GitHub. Presented on Coconut at PyCon 2017 and was interviewed on Coconut for TalkPython, Podcast.__init__, and Functional Geekery. Dean's list student majoring in mathematics and computer science at Harvey Mudd College.

Work Experience

Computer Science Grader and Tutor — January 2016 – Present
Harvey Mudd College, Claremont, CA
• Graded and tutored Computability and Logic, Data Structures and Program Development, Principles and Practices of Computer Science, and Computer Science for Insight.

Site Reliability Engineering Intern — May – August 2017
Google, Mountain View, CA
• Worked as a Launch Coordination Engineer (LCE) developing the software Google uses to perform production readiness reviews of new product launches.
• Revamped the custom domain-specific language built by the LCE team to automate launch reviews.

Software Engineering Intern — June – August 2016
Yelp, San Francisco, CA
• Primary author of Undebt, an open-source static code analysis tool for massive automated code refactoring with over 1,400 stars on GitHub.
• Wrote a blog post on Undebt (link below), which proved to be Yelp's most popular blog post to date and was featured on the front page of Hacker News.
https://engineeringblog.yelp.com/2016/08/undebt-how-we-refactored-3-million-lines-of-code.html
• Fixed errors in Yelp's configuration management that had previously taken down yelp.com.
• Rewrote Yelp's system for running large data processing operations in Elastic Map Reduce.

Software Engineering Intern — June – August 2014; June – August 2015
Ripple, San Francisco, CA
• Worked on designing Interledger, a trustless system for cross-currency transactions between arbitrary agents.
• Wrote a tool to do cryptographically secure generation of wallets for financial institutions.
• Contributed significant improvements to the compilation/build process of the open-source RippleD project.

Personal Projects

The Coconut Programming Language — October 2014 – Present
http://coconut-lang.org
• Created the Coconut programming language, a novel functional programming language that compiles to any Python version. Supports pattern-matching, algebraic data types, TRE/TCO, and much more.
• Coconut has been viewed over 50,000 times; has over 1,100 stars on GitHub; has been shown on the front page of Hacker News, r/Python, and r/Programming; and has been featured on InfoWorld.com and Pointer.io.
• Presented on Coconut at PyCon 2017 (see https://us.pycon.org/2017/schedule/presentation/56).
• Was interviewed on Coconut for TalkPython, Podcast.__init__, and Functional Geekery.

BBopt — September 2017 – Present
https://github.com/evhub/bbopt
Developed a universal black box optimization framework for tuning hyperparameters. Written in Coconut.

cPyparsing July 2017
https://github.com/evhub/cpyparsing
Reimplemented PyParsing in Cython to achieve ≈ 30% better performance for Coconut and Undebt.

Cards Against Humanity July 2014 – May 2017
https://github.com/evhub/cards-against-humanity
Developed a program for playing Cards Against Humanity with custom cards over IRC. Written in Coconut.

PyProver March 2017
https://github.com/evhub/pyprover
Developed a library for resolution theorem proving in first-order predicate logic. Written in Coconut.

DeTEXiPi October 2015
Hackathon project to laod DeTEXify onto a Raspberry Pi, connect it to a computer, draw symbols on it, and have it type out the LaTeX commands for those symbols on the computer.

Discrete Wavelet Transform Steganography April – May 2015
https://github.com/evhub/steganography
Developed a program to perform discrete wavelet transform image steganography. Written in Coconut.

Iterated Recursive Prisoner's Dilemma Simulator April 2015
https://github.com/evhub/prisoner
Developed a library for performing and competing in iterated prisoner's dilemma competitions in which the competing programs can simulate the opposing programs. Written in Coconut.

The Rabbit Programming Language April – December 2014
https://github.com/evhub/rabbit
Created the Rabbit programming language, a purely functional, interpreted, dynamically-typed scripting language built on top of Python. Wrote a technical paper describing the language.

Open Source Contributions

Pre-Commit Fixed an issue that prevented installing pre-commit on Windows machines. July 2017
Conda (of Anaconda) Added support for advanced PEP 496 packaging features. May 2017
Python Typeshed Added type annotations for the `future_builtins` module. October 2016
Jupyter (formerly IPython) Added support for custom syntax highlighting. July 2016
StaticConf Improved resiliency in the event of missing data. September 2016
PyParsing Fixed numerous issues including Unicode support and PyPy compatibility. November 2015

Relevant Courses

Machine Learning Fall 2017
Neural Networks Fall 2017
Abstract Algebra Fall 2017
Computability and Logic Spring 2017
Mathematical Analysis Spring 2017
Independent Study in Computer Science Fall 2016
• Worked directly with Professor Christopher Stone on Coconut development and research.
Image Processing and Object Recognition Fall 2016
Advanced Differential Equations and Linear Algebra Summer 2016
Multivariable Calculus Summer 2016
Discrete Mathematics Spring 2016
Data Structures and Program Development Fall 2015

Other Activities and Awards

Harvey Mudd Physics Department Rojansky Writing Award Winner May 2017
http://evhub.github.io/papers/everett.pdf
Awarded for the technical writing in my paper *Multiple Worlds, One Universal Wave Function* (link above).

Harvey Mudd Effective Altruism Club Leader (2017) — Effective Altruism Global Attendee (2017) — World Wide Web Consortium Interledger Payments Community Group Member (2016) — National Forensics League Honor Society Outstanding Distinction (2015) — National Policy Debate Tournament of Champions (2014, 2015) — East Bay Debate League Assistant Tournament Director (2013 – 2015) — College Prep Computer Science Club Leader (2013 – 2015) — National AP Scholar (2015) — National Latin Examination Summa Cum Laude (2014) — National Merit Commended Scholar (2014) — International Mathematics and Verbal Talent Search High Honors (2010)