Evan Hubinger

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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 Expert Proficient Knowledgeable

LANGUAGES 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 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 Google, Mountain View, CA

May – August 2017

January 2016 – Present

- 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 Yelp, San Francisco, CA

June – August 2016

- 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 Ripple, San Francisco, CA

June – August 2014; June – August 2015

- 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.

cPyparsing July 2017

https://github.com/evhub/cpyparsing

Reimplemented PyParsing in Cython to achieve $\approx 30\%$ 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.

DeT_EXiPi 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

Machine Learning

Neural Networks

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 CONTRIBU-TIONS

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
PvParsing Fixed numerous issues including Unicode support and PvPv compatibility.	November 2015

Relevant Courses

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

OTHER ACTIVITIES AND AWARDS

Harvey Mudd Physics Department Rojansky Writing Award Winner

May 2017

Fall 2015

Fall 2017

Fall 2017

http://evhub.github.io/papers/everett.pdf

Data Structures and Program Development

Awarded for the clear and concise 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)