

Education

B.A. in **Computer Science** (expected), *Boston University*. Sep 2013 – May 2017

- Minor in Philosophy.
- GPA: 4.0 in-major; 3.94 overall.
- Coursework includes: Analysis of Algorithms, Concurrency & Queueing Theory, Combinatorics, Programming Languages, Graph Theory, Computer Networks, Probability, Data Mining, Logic, and Modern Algebra.

Experience

Software Engineering Intern, BU Software & Application Innovation Lab. Sep 2016 – Present

- Adding extensions to Pydrogen, an abstract interpretation library in Python, to analyze the complexity of functions written in Python and to reason about quantum algorithms.

Undergraduate Researcher, BU Hariri Institute for Computing. Sep 2016 – Present

- Research on providing model selection and the capabilities of neural networks in a programming primitive.
- Using Tensorflow to approximate functions written in Python through a decorator.

Software Engineering Intern, Google Inc. May 2016 – Aug 2016

Worked extensively in Python and the Google build system to make crucial improvements to the reliability of an internal latency testing service used by teams including Maps, Ads, and Youtube:

- Wrote a tool to test new canary releases as a part of the server-side release process, providing increased test coverage and a clear-cut indicator of stability.
- Set up the logic and workflow for a continuous client-side release process, decoupling the team's infrastructure from potential breakages introduced into the monolithic Google codebase.

Undergraduate Researcher, Boston University & Tufts University. May 2015 – May 2016

- Wrote code to compute diffusion-based distance and functional similarity metrics on protein-protein interaction (PPI) networks in parallel using Numpy, NetworkX, and Python's multiprocessing module.
- Designed experiments with Matplotlib to analyze how well metrics performed as predictors of function.
- Uncovered major distortions in our metrics caused by structural properties of the PPI networks.

Skills

- Python; Java; C (basic); Haskell (basic); SQL (basic).
- HTML/CSS; LaTeX; NumPy; NetworkX; Matplotlib; PyBrain; Bazel; Git; Linux.
- English (native); Mandarin (conversational); Japanese (basic).

Projects

- **APT Detection** (Fall 2015). Used graph-theoretic methods and belief propagation, a learning algorithm, on DNS log samples from the Los Alamos National Laboratory to detect network attacks.
- **Language Tools** (Fall 2015). Wrote a parser, interpreter, type-checker, compiler, and bounded exhaustive tester for a small embedded programming language in Haskell.
- **Connect-Four** (Fall 2014). Player AI for a Connect-Four program in Java using Minimax search and Alpha-Beta Pruning. (Accidentally) beaten just 5 times out of ~500 games played.

Awards

- Sponsor prizes from HP and Linode at AngelHack Boston 2015 for a web application designed to find "happier" routes for users to travel by.
- Research awards, Boston University Undergraduate Research Opportunities Program (Fall 2015, Spring 2016, Fall 2016).