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timql.github.io
github.com/timql

Tim Lim

Education

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

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

Experience

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

· Building on top of Pydrogen, an abstract interpretation library in Python, to analyze quantum algorithms.

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

· Research on neural network model selection for small datasets, with the ultimate goal of providing the capabilities of neural networks in a programming language primitive.

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

Worked extensively in Python and the Google build system (Bazel) 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); IA32 Assembly (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 award, Boston University Undergraduate Research Opportunities Program (Fall 2015, Spring 2016).