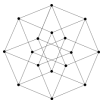

Samuel Thomas

Resumé

Education

2016–Present **B.S**, *Cornell University*, Ithaca, *GPA 3.013*.
Major in Computer Science, Concetration in Linguistics

2012–2016 **High School Diploma**, *John Marshall HS*, Los Angeles, *GPA 4.071*.
Graduated with High Honors

Publications

November 2019 *"Predictable Accelerator Design with Time-Sensitive Affine Types"*. Rachit Nigam, Sachille Atapattu, Samuel Thomas, Theodore Bauer, Apurva Koti, Zhijing Li, Yuwei Ye, Adrian Sampson, Zhiru Zhang. Under review for PLDI 2020.

Experience

2019 Summer – Present **Capra**, *Cornell*.
- Worked on Dahlia, a programming language that uses affine types to model hardware resources.
  - Helped to write the paper we submitted to PLDI 2020.
  - Ran extensive experiments comparing Dahlia to other HLS tools.
  - Helped write the Dahlia compiler.
- Lead the Calyx project, a novel intermediate language that separates the structure of a program from the control of the program to enable more modular high level synthesis. `https://github.com/cucapra/futil`.
  - Develop a prototype interpreter and visualizer for Calyx and design its semantics.
  - Develop a modular pass framework for Calyx.

2018 – Present **Teaching Assistant**, *Cornell*.
Taught a discussion section and held office hours for Cornell's CS 3110, a class on functional programming in OCaml.

2018 Summer **Information Science Institute**, *USC*.
- Worked with Greg Ver Steeg on meta machine learning problems. `https://github.com/sgpthomas/sklearn-pmlb-benchmarks`.
  - Design a system to scalably run machine learning experiments across hundreds of machines.
  - Reproduce the results from the Penn ML Benchmark suite.
  - Extend the metrics gathered from the Penn ML Benchmark suite to enable analysis of generalization error in machine learning algorithms.
- Used the Penn ML Benchmark to gather large amounts of data on the performance of different machine learning algorithms.

2017 Summer **Network Systems Laboratory**, *USC*.
Worked with Wyatt Loyd on DSEF, the Distributed Systems Experimental Framework, a framework for improving the reproducability of Distributed Systems experiments.
`https://github.com/DSEF`.

2013–2016 **LAPTAG Plasma Physics Lab**, *UCLA*.
Co-authored a paer on drift wave research with LAPTAG, a high school plasma physics laboratory at UCLA. Presented the results of the experiments at two conferences.

Jan 2017– Present **Cornell Hacking Club**, *Cornell University*, Ithaca.
Participate in CTFs, hold hacking workshops, and work on club projects.

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