



Education

- 2016–2020 **B.S.**, *Cornell University*, Ithaca, *GPA 3.1*.
Major in Computer Science, Concentration in Linguistics
- 2012–2016 **High School Diploma**, *John Marshall HS*, Los Angeles, *GPA 4.0*.
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. Published PLDI 2020.
- August 2020 "A Compiler Infrastructure for Accelerator Generators". Samuel Thomas, Rachit Nigam, Zhijing Li, Adrian Sampson. Under review for Asplos 2021.

Experience

- 2019 Summer **Capra**, *Cornell*.
– Present
- o Lead the FuTIL project, a novel intermediate language and infrastructure that separates the structure of a program from the control of the program to enable more simple construction of software-hardware compilers. <https://github.com/cucapra/futil>.
 - First author on paper submitted to ASPLOS 2021.
 - Developed working infrastructure that generate synthesizable RTL.
 - Organize a team of six people.
 - Work closely with undergraduate researchers to help introduce them to Computer Science research.
 - o 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.
- 2018 – 2020 **Teaching Assistant**, *Cornell*.
Teaching assistant for CS 3110, a class on functional programming in OCaml, for three semesters. Taught a discussion section for two semesters. Helped rewrite a major assignment for the class.
- 2018 Summer **Information Science Institute**, *USC*.
 - o 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.
 - o 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 reproducibility of Distributed Systems experiments.
<https://github.com/DSEF>.