Samodya Abeysiriwardane

San Jose, CA · hi@sransara.com · https://sransara.com

Summary

- **Generalist** with interests in **programming languages** / **dev tools** / **data intensive computing**

Education

Masters in Computer Science – **Purdue**, West Lafayette, IN — Spring 2016–Fall 2018

- *Workshop paper:* Mergeable Types, ICFP ML Workshop, 2017 – Contributed by implementing an OCaml AST transformer to auto derive 3-way merge functions for recursive data types
- *Courses:* Distributed systems, Advanced database systems (Relational and non-relational), Programming Language Theory, Algorithm design and analysis

Bachelors in Computer Engineering – **Purdue**, West Lafayette, IN — Fall 2011–Spring 2015

- *Courses:* Circuit analysis, Computer design and prototyping, Signals and systems, Data structures and algorithms, Discrete Mathematics, Advanced C, Intro to AI, Intro to Infosec, Compilers, Operating Systems

My ...

- **Writeups** – https://sransara.com/notes/
- **Open-source contributions** – https://github.com/search?q=author:sransara+type:pr

Projects

- (WIP) **Generic TypedDict proposal** *typed python* – https://github.com/sransara/py-generic-typeddict
- **Multiplayer chess variation** *typescript* – https://utopia.buddychess.com/
- **SOCK5 Proxy** *go* – https://github.com/sransara/odd-socks
- **Mergeable functional datastructures** *ocaml* – https://github.com/sransara/mtypes-lib
- **Distributed key-value store** *java* – https://github.com/sransara/kvs-transactions
- **Simple Compiler** *java* – https://github.com/sransara/microbe-lang
- **Multicore MIPS processor** *verilog* – https://github.com/sransara/aww-processor

Work

Software Engineer: Hardware test tools – **Cisco**, San Jose, CA — June 2019–Present

- Building infrastructure for automating validation of circuit diagrams and PCB layouts to their specifications
- Mentor new team members on coding standards, best practices and version control
- To aid a refactoring project, develop a tool to convert some non-trivial Perl syntactic constructs to Python
- *Experience with:* Mypy, Python, Perl, SKILL (A Lisp for EDA tools), EDA tools, ETL

Test Engineer: Hardware test tools – **Jabil Circuit**, San Jose, CA — Jan 2019–June 2019

- Develop a tab completer framework for an inhouse REPL, to build completers that improve debug workflow
- Extending the ETL pipeline, network tools, yield analysis tools for an HPC hardware emulation platform
- *Experience with:* Go, Python, CI/CD, Design for testing in electronics mass manufacturing

Test Engineering Intern: Hardware test tools – **Jabil Circuit**, San Jose, CA — Summer 2018

- Building an ETL pipeline for live analysis of testcell grid data (*Jabil - Design Best Practices* competition)
- *Experience with:* Data mining-visualization-analysis, Database design, Go, HTML/CSS/JS & React

Gradudate Research Assistant – **Computer Science, Purdue** — Jan 2017–Dec 2018

- *Worked on:* 3-way merging datastructures research project
- Explore mergeable functional datastructures and OCaml AST transformers (PPX)
- *Experience with:* Database consistency and concurrency control, OCaml, Git internals

Undergraduate Teaching Assistant – **Computer Engineering, Purdue** — Jan 2015–April 2015

- Guide students in taking design decisions to develop a multicore pipelined MIPS processor
- *Experience with:* Verilog, Logic synthesis on FPGA

Student Software Developer – **Krannert Computing, Purdue** — May 2012–Dec 2016

- Develop web and desktop apps. *Experience with:* C#, .NET, Database design, HTML/CSS/JS

Other

- Recognized in Google security hall of fame for disclosure of XSS bugs in Gmail: 2012 July, 2012 October