Samodya Abeysiriwardane

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Work

Test Engineering Intern **Jabil Circuit**, San Jose, CA May 2018–August 2018

- *Worked on:* End to end development of a tool for live analysis of internal test and debugging data
- Design and develop a failure resistant *testcell grid* data aggregator, the database and the frontend
- *Experience with:* Golang, Python, MySQL, ReactJS

Gradudate Research Assistant **Computer Science, Purdue** Spring 2017–Fall 2017

- *Worked on:* 3-way merging data structures research project
- *Workshop paper:* Mergeable Types, ML Workshop, 2017
- *Experience with:* OCaml, Git internals, Database Consistency

Student Software Developer **Krannert Computing, Purdue** Summer 2012–Fall 2016

- *Worked with a team on:* Backend and frontend for web and desktop applications
- CV Parser, Job Queue, Calendar Application, Course Content aggregator. ...
- Mentor new students on coding standards, best practices and version control
- *Experience with:* C#, MSSQL, Complex Regex, XSLT, HTML/CSS/JS, MVC, TFS

Undergrad Teaching Assistant **Computer Engineering, Purdue** Spring 2015

- *Course:* Computer Design and Prototyping (ECE437)
- Assist students in benchmarking, analyzing performance, taking educated design decisions to develop a Multicore pipelined MIPS processor
- *Experience with:* Verilog, Python, FPGA programming

Education

MSc Computer Science **Purdue**, West Lafayette, IN Spring 2016–*Fall 2018*

- *Courses:* Distributed systems, Advanced database systems (Relational and non-relational), Programming Language Theory, Algorithm design and analysis

BSc Computer Engineering **Purdue**, West Lafayette, IN Fall 2011–Spring 2015

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

Notable projects

Mergeable Types *ocaml* https://github.com/sransara/mtypes-lib

- Develop an AST transformer using OCaml PPX
- Extend Okasaki's Purely functional data structures with 3-way merge operation

Distributed Key-Value Store *java* https://github.com/sransara/kvs-transactions

- Implement a key-value store with key level granular 2PL based transaction support
- Paxos replicated log based sharding support

Micro Language Compiler *java* https://github.com/sransara/microbe-lang

- Build an extensible compiler for a given language grammar
- Implement Register allocation, IR generation, Control flow graph analysis

Multicore MIPS processor *verilog* https://github.com/sransara/aww-processor

- Develop a multicore processor for MIPS instruction set architecture
- Optimized and tested the synthesized design on FPGA

Other

- Recognized in hall of fame as reward recipient for disclosure of XSS bugs in Gmail: 2012 July, 2012 October
- Awarded bronze medal at International Junior science olimpiad, Baku, Azerbaijan: 2009