Seth Kirby

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EXPERIENCE

- **Google Inc** — Mountain View, CA
  Software Engineering Intern — *05/15 to 08/15*

  Added Java 8 lambdas and method references to J2ObjC transpiler. Wrote, shared, and iterated design documents on compilation strategy. Expanded translation pipeline, adding Java 8 AST nodes and implementing Objective-C blocks as class methods at runtime. Worked with and expanded testing frameworks in a continuously integrated and fully peer reviewed environment. Materially redesigned j2objc.org using Github pages and Jekyll.

- **Intel** — Folsom, CA
  Technical Intern — *02/15 to 05/15*

  Performed software and electrical engineering tasks on processor structural design team. Designed chip convergence metric charting system using MsSQL, MySQL, and Node.js. Built queries and macros for DBA metrics in MsSQL, Excel, and PowerPivot. Collaborated internationally to optimize metal routing using TCL, Perl and internal design tools. Designed Python system to identify, document, and reclaim inactive and orphaned storage.

- **JPMorgan Chase and Co.** — Columbus, OH
  Software Development Intern — *06/14 to 08/14*

  Utilized database concepts, while working with SQL, Informatica, Python, Java, Batch scheduling, Bash, XML, Perl, and in-house tools on a DB ETL team. Collaborated internationally while creating systems to validate ETL jobs, parse and search scheduling jobs, manage SVN conflicts, and visualize access management.

- **Indiana University** — Bloomington, IN
  Undergraduate Instructor Positions — *08/14 to 12/14*

  Instructor for C335 systems specialization and C211 computer science courses. Systems work on embedded programming using C and assembly. Work with ARM Cortex-M3 processors, diverse I/O, asynchronous serial, UART, SPI, I2C, interrupts, and DMA, to build drivers and projects for a variety of sensors and outputs. Taught programming fundamentals in Scheme and Racket, while balancing labs, grading, and office hours. Developed in Ruby and Bash software to manage delegation, recording, and accountability of grading tasks.

  Research Assistant — *05/13 to 08/13*

  Performed research testing and reimplementing a protocol for reversible concurrency. Tested language implementations in Ruby and Scala while collaborating with peers, PhDs and professors in developing examples to illustrate protocol correctness. Worked in combining implementation and examples in paper entry to PPoPP.

EDUCATION

- **Indiana University** — Bloomington, IN
  GPA In Major: 3.95 Overall: 3.87 — *08/12 to 05/17*

  Engaged in a Computer Science BS with focuses in programming languages and embedded systems.

PROJECTS

- **Racket C211 Tools Library** - Open Source Project — *09/13 to 02/15*

  Created and maintained tools used in teaching C211 entry level computing course at IU. Includes custom libraries for manipulating images, matrices, and trees in Racket. Enables functional concepts such as map and lambda calculus over various data types. Developed testing suite for easy upkeep and error checking.

- **Cryptocurrency Mining** - Owner and Operator — *03/13 to 06/14*

  Leveraged initial GPU hardware to create and grow computational mining farm. Scaled processing power to over 4000% of initial, funded entirely by mining earnings. Developed custom software, including inexpensive, network accessible, remote power management system using Raspberry Pi, Linux, GPIO, Python, and Django.

- **Button Down Mobile Fashion** - Mobile Developer — *11/13 to 06/14*

  Part of seven person team which competed in and won Startup Weekend Bloomington. Rapidly proposed, planned, and created a mobile-centric fashion application written in Java for Android. Worked with business, marketing, and design professionals to create a proposal, presentation, and rapidly develop an application to showcase minimum viable product during a 54 hour timeframe. Featured at multiple Verge startup events.

PROFICIENCIES

Java, C, C++, Android, Python, Ruby, Matlab, Rails, Linux, Bash, SQL, ETL, Lisp, Racket, Visual Basic, PHP