

CHRISTOPHER ALAN SWENSON

Portland, OR, USA

Email: swenson@swenson.io

GitHub: <http://github.com/swenson>

LANGUAGES & PLATFORMS

Go, Scala, Clojure, JavaScript, Java, Python, Ruby, C, C++, Swift, Cuda, assembly language (x86, 6502)

React, Angular, Node, Dropwizard, Django, Rails, Chef, SageMath

PostgreSQL, MySQL, ZooKeeper, RabbitMQ, SQS, Redis, git, Subversion

EXPERIENCE

- 05/2014–present **Mathgeneering (Consultant)**: Assisted Simple, an online bank, with software development for a large infrastructure transition. Worked with Trail of Bits to define and develop infrastructure for their DARPA Cyber Grand Challenge bid. Performed security reviews, audits, and Android/iOS development for Tozny, a mobile authentication platform. Served as a cryptography advisor and developer for a blockchain startup. Worked with CircleCI on infrastructure improvements and chatops. Wrote open source AVR drivers to the internals of keyboard.io.
- 04/2016–10/2016 **Capital One (Technology Fellow)**: Consulted with banking core technology products, providing guidance and experience on building the inner accounting, credit card, and other financial systems to serve all of Capital One. Built a prototype core for a new financial loan product. Wrote sensitive financial mathematics code and served as an expert on keeping track of money electronically. Wrote an ISO 8583 interface implementation to handle credit and debit traffic from Visa and Mastercard to core systems.
- 02/2015–03/2016 **Seed (Principal Software Engineer, Director of Information Security)**: Designed, prototyped, and launched initial version of business banking software in Go and JavaScript (React) within six weeks. Architected the back-end financial system, and led the back-end team of three to implement it. Operated as a technical lead of seven engineers, overseeing development of the entire product. Acted as the director of information security, supervising audits and ensuring our system maintained the highest standards for protecting our users' data.
- 09/2012–05/2014 **Simple (Backend Engineer)**: Architected, implemented, and maintained infrastructure services for a financial startup on a team of seven on a SOA JVM ecosystem. Served as the lead system designer and primary developer on a payment processing project, ingesting and handling credit card swipes. Coordinated heavily with the operations team to develop and maintain various platforms.
- 02/2011–09/2012 **Google (Software Engineer)**: Designed and implemented a massive structured data crawling and collection engine. Worked on a small team implementing highly scalable structured data input, conversion, and output services, accepting complex XForms XML data submissions and storing them in large-scale database. Developed wild and crazy ideas for reducing memory consumption for various utility classes in Guava, a widely used Java library.

EDUCATION

- University of Tulsa** 2009
Degree Doctor of Philosophy, Computer Science
- University of Tulsa** 2005
Degree Master of Science, Computer Science
- University of Tulsa** 2003
Degree Bachelor of Science in Computer Science (*cum laude*), Computer Science, Mathematics