

Getty Ritter

Work

- 2018–Present **Compiler Engineer**, *Groq, Inc.*, Portland, OR.
Worked on a system for compiling TensorFlow machine learning models to a custom ASIC for accelerating inference, with a specific emphasis on optimizing speed and memory usage of the compiler itself.
- 2012–2018 **Engineer and Researcher**, *Galois, Inc.*, Portland, OR.
Worked as an engineer and researcher on a wide variety of different research projects, notably including the following:
- Built static analysis tools for C on top of the Frama-C verification framework which worked in concert with an experimental video game front-end designed to enable non-technical users to produce proofs of software correctness.
 - Extended the QEMU hardware emulator to support an experimental extended instruction set designed to impede Return-Oriented Programming attacks, and patched a compiler tool-chain, Linux kernel, and parts of a typical Linux user-land to support this architecture in order to facilitate “practical” emulated testing of its security properties.
 - Developed the compiler for the experimental Grappa probabilistic programming language, designed to compile an abstract model specification into a generic representation which in turn can be executed using a wide variety of different probabilistic techniques.
 - Patched the CAMkES component framework for the seL4 microkernel to support Rust projects, and patched preliminary seL4 support into the Rust standard library for several target platforms.
- 2011–2012 **Graduate Teaching Fellow**, *University of Oregon*, Eugene, OR.
Taught various courses at varying levels of expertise, ranging from basic introductory material to advanced material about programming language theory and operating systems.
- 2010 **Developer**, *Noisy Creatures*, Berkeley, CA.
Designed and implemented iPad-based video game.
- 2007-2010 **Tutor**, *University of California Berkeley*, Berkeley, CA.
Tutored students in a one-on-one environment to teach a wide variety of programming languages and environments. From 2009 to 2010, also worked as Head Tutor, developing new curricula, projects, and tests for the center.

Education

- 2006–2010 **B.A. Linguistics & equivalent of B.A. Computer Science**, *University of California Berkeley*, Berkeley, CA.
- 2010–2012 **M.S. Computer and Information Science**, *University of Oregon*, Eugene, OR.

Open Source Projects

- matterhorn A feature-rich terminal-based client for the Mattermost chat system
- s-cargot A flexible and powerful s-expression parsing library
- config-ini A bidirectional configuration parsing library

Skills

- Proficient with: C, Haskell, JavaScript, OCaml, Python, Rust, Scheme, SML, UNIX/Linux
- Some experience with: Assembly (x86, x86_64, ARM), C++, Common Lisp, Erlang, Go, Java, PHP, Ruby, Scala, seL4
- Spoken languages: English fluently; some Mandarin, Italian, and Russian