

Slava Pestov

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Skills

- 12 years of professional experience
- Passion for code quality and robust architecture
- Systems programming:
 - Language design and compiler implementation
 - Modern file systems
 - Tail latency analysis and tracing
- Languages:
 - Primary: C, Objective-C, C++, Swift, Python, Java, x86
 - Also: Lisp, Smalltalk, Forth, Prolog, ARM32, PowerPC
 - Can learn new languages quickly
- Hardware:
 - Flash memory, PCIe
 - Reading datasheets and schematics
- Code review, documentation, planning, mentorship, interviews

Work Experience

- **Apple, Inc** (Cupertino CA; 04/2015 - present)
 - Working on the *Swift programming language* (<https://github.com/apple/swift>)
 - [#2 top contributor to the GitHub repository](#)
 - Key focus areas:
 - Binary framework resilience and ABI
 - Implemented several major language features
 - Name lookup and the type system
 - Speeding up compilation time
 - [This blog post](#) is a good cross-section of my work -- I worked on all the listed improvements except the first two
 - Presented "[Implementing Swift Generics](#)" at 2017 LLVM Developer's Summit
 - Presented "[What's New in Swift 4.2](#)" at WWDC 2018
- **Datera, Inc** (Mountain View CA; 04/2014 - 04/2015)
 - Linux kernel engineer at an early-stage startup, working on *bcache* (<http://bcachefs.org>)
 - Extending bcache into a virtual volume manager and file system with tiering between flash and disk

- Improving scalability, reliability and tail latency
- **Google, Inc** (Mountain View CA; 08/2010 - 04/2014)
 - Technical lead of *software stack for a flash memory device*, consisting of a Linux kernel driver, firmware, and userspace tools
 - Led the project through design, implementation, deployment, and post-production maintenance, working closely with hardware team
 - Worked on the implementation of the firmware, kernel driver and user-space tools
 - Storage capacity planning, latency analysis
 - Over 100 interviews
- **Stack Effects, LLC** (Minneapolis MN; 01/2008 - 12/2009) - Software Engineer
 - Led design and implementation of the *Factor programming language* (<http://factorcode.org>) at a small startup funded by one of Factor's main contributors
 - Presented [a Google TechTalk](#) in 2008

Free Software

I led the development of two large free software projects. Both projects continue to be maintained by the open source community.

- **Factor** – <http://factorcode.org> (2003 - 2010) – Creator
 - High-level dynamically-typed programming language inspired by Forth, Lisp, and Smalltalk
 - Powerful meta-programming features which allow the syntax and semantics of the language to be extended with user code.
 - Self-hosting optimizing compiler
 - Virtual machine with generational mark-sweep-compact GC
 - Worked with a community of contributors, mentoring beginners and reviewing code
 - Presented Factor at several conferences and published a paper
- **jEdit** – <http://jedit.org> (1998 - 2005) – Creator
 - Led the design and implementation of a programmer's text editor with extensive support for “plug-in” extensions and scripting
 - jEdit was one of the first large-scale Java applications to use the Swing GUI toolkit, and was featured in many publications

Publications

- [Factor: A Dynamic Stack-based Programming Language](#). Slava Pestov, Daniel Ehrenberg, Joe Groff. Dynamic Languages Symposium, Reno, Nevada, 2010.

Education

- **MSc Mathematics** (University of Ottawa, 2008)
 - Proved a new result in algebraic topology.
 - [Thesis](#)