Paul Schoenfelder April 12, 1987

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Summary

I'm an experienced software engineer with a love for open source, languages and distributed computing, and a passion for developing high-quality software.

I started out in IT as a network engineer, working with Cisco equipment, but it wasn't long before I had delved in to writing scripts for automation. Once I had a taste for code, I knew it was where I belonged, and I was relentless in pursuing an open developer position at the same company. I was given the opportunity, and I've been a software engineer ever since.

I was thrown in to the world of software engineering, and had to learn fast. I've soaked up books, blogs, talks, whatever I could. I have become proficient in numerous languages, technologies, and practices along the way, and achieved mastery in many of them.

I'm active in open source. I experiment with embedded development. I love functional programming and the challenges of concurrency and distribution. But most of all, I love building software.

Professional Experience

Distru — Remote

Senior Software Engineer — Jan '20 – present

At Distru, I've spearheaded a number of different efforts to improve software reliability and turnaround time for fixes and new features. The most significant of these has been migrating the platform from its Heroku roots to Google Kubernetes Engine, consolidating our infrastructure under GCP, ensuring all of it is managed via Terraform and Helm, setting up a fully automated self-service continuous delivery pipeline, and providing a cutting edge observability stack for engineers to better understand the runtime behavior of the platform and enable them to troubleshoot issues quickly and effectively.

DockYard — Remote

Architectural Engineer — Oct '17 – Jan '20

My role at DockYard took two shapes: first as software architect on client projects, primarily focused on deployment and infrastructure; second as technical lead on various R&D projects. I was originally hired to work on my open source projects, namely Distillery, and get releases integrated into Elixir Core, which happened in Elixir 1.9. The last year of my time at DockYard was spent working on Lumen, an ahead-of-time compiler for Erlang and Elixir that targets WebAssembly.

FireEye — Remote

Senior Staff Software Engineer — Jan '17 – Oct '17

My role at FireEye was focused on the implementation of a concurrent, distributed, throughput-heavy workflow and data processing engine for security orchestration, built in Elixir.

Exosite — Minneapolis, Minnesota

Senior Web and Infrastructure Engineer — Oct '15 – Jan '17

Lead developer on some of Exosite's most critical core services, built on Erlang and Elixir, with a few in Go (with parts written in C). Became very proficient with an array of AWS services, as well as Kubernetes in order to implement an OpenShift-based hosting platform for customer and internal applications. The applications I built were distributed, highly concurrent infrastructure services, with all the resultant challenges. I am heavily involved in the Erlang/Elixir community, and gave two talks, one at ElixirConf 2015, and one at ElixirConf 2016.

The Nerdery — Bloomington, Minnesota

Senior Software Engineer — Mar '13 – Oct 15

Lead developer for a number of projects both large and small, managing teams of 2 to 10 devs. C# and Scala work primarily, but some F# as well. Built a number of open source libraries for the Elixir community, including contributions to the language itself. Focused on growing my functional programming, cryptography, and concurrent/distributed systems skills in my spare time.

United States Air Force — Madison, Wisconsin

Avionic Systems Journeyman — Apr '09 – Apr '15

While in the military, I achieved the rank of Senior Airman while working on Lockheed Martin F-16C/D fighter aircraft. I was responsible for maintaining the avionics systems, which involved understanding software, electronics theory, and numerous complicated subsystems of the aircraft.

You may refer to my LinkedIn profile for more a more complete list of my work experiences along with recommendations.

Notable Open Source Projects

Lumen

Technical Lead/Maintainer — Jan '19 – present

Lumen is an ahead-of-time compiler for Erlang and Elixir that can target a variety of architectures, of which WebAssembly is of primary interest. It can be thought of as an alternative to the BEAM virtual machine, except rather than a virtual machine, Lumen compiles to native code. In addition to the compiler, Lumen also includes a runtime that allows it to integrate with browser APIs when targeting WebAssembly. It is built in Rust and C++, and builds on top of LLVM.

Distillery

Author/Maintainer — May '16 – present

Distillery is a release-management tool for Elixir applications, effectively a redesign/rewrite of ExRM, the original tool I wrote for the same purpose. It is the primary and officially recommended tool for deploying Elixir-based applications. It is a very active OSS project, with many contributors.

Timex

Author/Maintainer — Nov '13 – present

Timex is the premier date/time library for Elixir projects. It provides functionality that even most standard library packages in other languages fail to offer. It provides rich parsing/formatting facilities (including locale-awareness), timezone-aware date/time arithmetic, a modular architecture, operations on intervals, and more.

My GitHub profile contains a list of the many other projects I'm involved in, feel free to take a look!

Conference Talks

2019: CodeMesh LDN, ElixirConf, LoneStar Elixir

2018: The Big Elixir, LoneStar Elixir, CodeBEAM SF

Older: ElixirConf x2, LoneStar Elixir

Podcasts

2020: Elixir Wizards

2019: Smart Software with SmartLogic, Elixir Talk, ElixirMix

Skills

Languages: C, C#, Clojure, Elixir, Erlang, F#, Go, Javascript, Lua, OCaml, Python, Ruby, Rust, Scala, Shell

Theory: Type theory, compilers, interpreters, data structures and algorithms, distributed consensus, messaging and protocol design

Dev/Ops: Networking, administration of Linux and Windows systems, deployment automation, container orchestration (Kubernetes), continuous integration/delivery with internal and external build systems, GCP/AWS services

Development: I've built applications ranging from simple scripts to desktop applications with graphical interfaces. Single-threaded console utilities, to distributed, heavily-concurrent backend services where performance is critical. I've worked on scripting systems, web applications, some embedded software, and designed and developed remotely upgradeable, hot-pluggable services for gateway devices. If it's something new, I make a point to learn everything I can about the domain, and then dive in.

Non-technical skills: Have been starting to learn Russian thanks to my wife, and trying to improve every day

Interests

Non-exhaustive and in no particular order: programming language design and theory, woodworking, artificial intelligence, game development, music, snowboarding, homebrewing, motorcycles, the outdoors, and more! I love to learn, so there is almost always something new I'm picking up.