

Industry veteran software and systems generalist with 20 years experience in professional software engineering and development.

End-to-end tooling, service, and application lifecycle, from design, implementation, & documentation, to deployment and maintenance.

Strong reasoning and troubleshooting skills. Excellent written and verbal communication skills.

On-Site or Hybrid Preferred

Location: Sunnyvale, Calif.

Email: tim@penryu.dev

Programming Languages

- **Primary:** Rust, Perl, Python, C, TypeScript/JavaScript, Shell, Java
- **Secondary:** Lua, C++, Java, C#, Scala, Clojure/ClojureScript, Ruby

Skills Summary

- **Networking:** ssh, http, tcp/ip, smtp, dns, dhcp, and network firewalls
- **Firewalls:** pf, ipfw, iptables, Cisco IOS/PIX/ASA
- **Web Technologies:** REST, JSON, HTML, CGI, nginx, Apache
- **Systems Technologies:** Linux, macOS, FreeBSD, OpenZFS, OpenBSD
- **Development Tools:** Vim/NeoVim, VSCode, IntelliJ, git, svn, CMake, make
- **Virtualization:** qemu/kvm, libvirt/virsh, Proxmox, VMware/ESXi, Xen
- **Containers:** Docker, podman, some LXC
- **Spoken Languages:** English (native), Spanish, touch-type @ 60+ WPM, ~~TeX~~.

Certifications & Training

- US DoD Secret Clearance (§ 1.6, *inactive*)
- US DoD System Administration/Network Management Training (§ 3.1)
- Oracle Java SE 8 Programmer I

1 Experience

1.1 Senior Software Engineer, Platform Development

OpenDrives, Culver City, Calif. (remote)

2022 — 2026

- Languages: Rust, Python, Shell, Perl, C, TypeScript
- Technologies: OpenZFS, Docker, Kubernetes, GitLab CI, beadm, systemd, fio, FUSE
- Design, implement, and support Rust-based storage health monitoring service for flagship product
- On-boarding of engineers to new technologies. Mentoring of junior engineers
- `ztop`¹: Ported Rust-based OSS filesystem monitoring tool to Linux
- `upgrader`: Design and lead greenfield project built on zfs, zfs, Docker, systemd-nspawn, and Python3
- `orville`: Implemented FUSE-based virtual fs in Rust with modular backend filesystems

¹<https://github.com/asomers/ztop/pull/26>

1.2 Senior Software Engineer

Chegg, Santa Clara, Calif.

2018 — 2022

- Languages: TypeScript, Python, Perl, Shell, Java, Clojure
- Technologies: Next.js, React, GraphQL, Jest, GitHub, GitLab, Docker, Jenkins, AWS (EC2, ECS)
- End-to-end development of the student face of Chegg²'s site
- Cross-functional collaboration ensuring developer, student, and corporate needs are met
- Design and develop tools and platforms to release and deploy mission critical applications
- Diagnose & troubleshoot software build, launch, and communication issues

1.3 Release & Integration Engineer, Developer Tools

Apple, Cupertino, Calif.

2013 — 2018

- Languages: Python, Perl, C++, Shell, JavaScript
- Technologies: Git, JVM, CMake, Tomcat
- Extend and improve test and build systems for LLVM and LLDB
- Development and maintenance of public and internal build systems
- Developing, testing, and deploying applications in large clusters
- Troubleshooting hardware, software, and network communications

1.4 Backend Software Engineer, Legal Platform

Ultimate Internet Alliance, Ontario, Calif. (Remote)

2011 — 2012

- Languages: Perl, Python, Shell, PHP, JavaScript
- Technologies: CouchDB, FreeBSD & Linux system design & administration
- Web Application Design
- FreeBSD System Administration

1.5 Systems Administrator

Food Bank of Northern Nevada, Sparks, Nevada.

2008 — 2010

- Configure and deploy Windows Active Directory network (Win2k8, Win7)
- Network infrastructure configuration & maintenance (Cisco IOS, ASA)
- Physical infrastructure (run and terminate cables, interface with ISP technicians)

1.6 Computer Systems Analyst, Contractor

Vista International Operations (VIOPS), Sierra Army Depot (SIAD), Calif.

2005 — 2008

- U.S. DOD subcontractor
- U.S. DOD Secret Security Clearance (*inactive*)
- U.S. DOD System Admin/Network Management (SA/NM) Training
- Cryptography and Authentication training: SSH, SSL, IPSec, VPNs, tunneling
- Protocols: ISO & DOD TCP/IP stack, TCP/UDP, ICMP, IPSec
- Design and implement web application with IIS/ASP and Google Maps
- Linux mail and FTP, Cisco PIX firewalls, DNS/BIND9 administration, database app development

²<https://www.chegg.com>

1.7 College Instructor

Truckee Meadows Comm. College, Reno, Nev.

2004 — 2007

- Beginning & Advanced Linux System Administration courses
- Beginning & Advanced Perl courses

2 Open Source Contributions

I maintain several personal Git repositories³ and a personal technology and programming blog.⁴

I like to add support for additional platforms to existing project.

I ported the Rust-based ZFS dataset activity monitoring tool ztop⁵ to Linux as part of my work for Open-Drives (§ 1.1), and trivially added support for FreeBSD to hwatch⁶.

I developed the dug⁷ utility out of a personal need for a tool to help me debug potentially complex DNS resolution issues quickly.

I've developed tools for the LLVM.org Green Dragon CI⁸ as part of my work for Apple (§ 1.3). These contributions can be found in the zorg⁹ repository.

I have contributed Perl modules to the Comprehensive Perl Archive Network (CPAN).¹⁰

3 Education

3.1 US DOD, SANM Security Training

- U.S. Dep't of Defense System Administration/Network Management Training
- Best practices for security policy and implementation
- Cryptography for authentication: IPSec, SSL, SSH, tunneling
- Protocols: ISO & DOD TCP/IP stack, TCP, UDP, ICMP, IPSec

3.2 University of Nevada

- Computer Science & Engineering (CSE) major
- Not graduated. Junior status with 4.0 GPA in major, 3.72 overall GPA
- Two years of Spanish. Honors English

4 Spoken Languages

English I am a native speaker of English and can use it effectively in any situation. (§ 3.2)

Spanish I can read, write, speak, and understand the Spanish language. (§ 3.2)

³<https://git.penryu.dev/penryu>

⁴<https://lex.pun.ninja>

⁵<https://github.com/asomers/ztop/pull/26>

⁶<https://github.com/blacknon/hwatch/pull/178>

⁷<https://git.penryu.dev/penryu/dug>

⁸<https://green.lab.llvm.org/>

⁹<https://github.com/llvm/llvm-zorg/commits?author=penryu@apple.com>

¹⁰<https://metacpan.org/author/TIMMY>