

Paul Nathan

website: <http://www.pnathan.com> email: paul@nathan.house
github: <https://gitlab.com/pnathan> cell: 208.892.1500

Summary I am a proven software engineer, team mentor, and computer science researcher. I have written software professionally since 2004 for both academia and industry; my hobby software-writing experience extends into the late 90s.

Skills and Abilities **Software Development:** Full Lifecycle, SRE
Computer Languages: Golang, Python, Common Lisp, Rust, Scala, & more...
Researcher: debuggers, embedded systems

Professional Experience **Sr. Principal Software Engineer** **CIQ**
Remote May 2021 - Sept 2023
Early engineer at CIQ wearing multiple hats and contributing around various key areas as needed.

Highlights

Hiring & Leadership Coaching junior engineers. Leadership of dynamic teams as needed. Collaborated to set bars for hiring, and was part of many candidate loops.

Fuzzball Built key software components for Fuzzball, CIQ's HPC solution - Secrets and IAM services. Secrets were backed by Hashicorp Vault. Integrated custom metrics. Collaborated to get Fuzzball infrastructure deployment running on AWS - built the first Kubernetes cluster Fuzzball ran on using Terraform. All code written in Go.

SRE/Infrastructure Centralized metrics, logs, traces via Grafana open source systems. Over 2M metrics peak, multi-gigabyte per day log traffic. Led infrastructure team of two other engineers delivering IaaS Pulumi (Go) and Terraform solutions for GCP and AWS, for both Fuzzball and other internal deployments. Supported and tuned Gitlab runners. Led cost-management solution deployment. Built out and extended the initial Kubernetes deployments onto GCP GKE as well as continued AWS EKS work.

Rocky Mirror CDN Led and delivered the first CIQ Rocky Mirror network spanning all GCP regions globally to production using Terraform.

Site Reliability Engineer III **Amperity**
Seattle, WA Nov 2020 - Apr 2021
Using Terraform and Salt, manage the multi-cloud(Azure, AWS) multi-tenant environments. Interact and improve the Riemann, InfluxDB, and Grafana metrics and monitoring stack on Ubuntu Server.

Sampling of work:

- Extend Riemann using Clojure plugins for new and improved metrics and monitoring.
- Build tooling (primarily in Python) around different routine tasks to remove our toil.
- Coach team to focus on software tools and cloud best practices

Senior Systems Software Engineer II

Providence Health - Digital Innovation Group

Seattle, WA

Sept 2018-Oct 2020

Senior & Lead Engineer on the Developer Experience and Site Reliability teams.

Highlights

Human Skills & Leadership Mentored/coached other developers, developed designs, led others in design development, set technical vision, cross-team project management, represented team to management and other senior ICs. Served as *de facto* manager as needed.

Set the team coding quality bars: process, tools, languages, etc. Led the team from Python to Go and Typescript.

Cross-team vision setting and consensus building for tools and CI/CD. Wrote and led the migration from Shippable to Jenkins for well over 30 services associated with all of the Digital Innovation Group's engineering teams, with associated technical work. Collaborated with other senior developer to design a "shrink-wrapped" deployment system for a cloud SaaS product.

Led project with several other software developers to deliver a traceability matrix project integrated with the cloud.

Led productization of our software to support spinoffs as part of the Digital Innovation Group business model. Defined what it meant, coordinated with Product, IT, and the team to ensure we could move successfully in this area.

Technical projects Senior engineering work; design review and support for team success.

Reviewed designs internally and externally, developed own designs.

Automated Jenkins deployments on Kubernetes well beyond the off-the-shelf Helm system: a complete config as code delivery.

Proof of Concept for Github Org security scanning on checkins, building a distributed system using open source scanners, Kubernetes services, and AWS infrastructure components.

AWS security consultant; designed IAM security policies for a spinoff, advised on asset configuration, network controls, etc.

Different small REST services & command line tools written in golang and Typescript to support the team.

Senior Software Engineer

The Climate Corporation

Seattle, WA

March 2014 - Sept 2018

Highlights

Human Skills & Leadership Mentored junior developers, performed the usual code & architecture reviews, collaborated with data science, engineering and science team members to improve processes and software.

Teams

Member of the Weather & Geospatial teams Oct 2016 - Sept 2018. Maintained and added to existing weather data ingest system in Python, developed new distributed ingest framework and architecture in Scala and React/Javascript. Increased operational stability of existing services.

Member of the SRE team March 2014 - Oct 2016. On pager, maintained the reliability and security of our AWS EC2 fleet. Became reasonably expert in many areas of AWS. Specialized in build, identity, and security.

Continuous Deployment Developed tools and process to allow source-to-production deployments. Includes managing Jenkins, Atlassian Stash, and consulting on git. Recent project: software tracability tool for deployments from git to production - <https://github.com/TheClimateCorporation/history-server>.

Identity Management Developed tools and processes to ensure correct onboarding, offboarding, and user management within the engineering and science organizations. Recent project: developed secret storage system using AWS Key Management.

Free and Open Source

At home, I developed an observability / wide-metrics platform, *pmetrics* - <https://gitlab.com/pnathan/pmetrics>. In spirit similar to Honeycomb.io, it was invented independently and today powers my home air quality measuring system.

Under the aegis of The Climate Corporation, I led development of a history server system, to track artifact history from source to deployment - <https://github.com/TheClimateCorporation/history-server>.

Education

University of Idaho 2012
Master of Science in Computer Science

University of Idaho 2006
Bachelor of Science in Computer Science
Minor in Mathematics