

Summary

Cloud engineering leader with a diverse background spanning design, development, security, and innovation. Proven expertise in building scalable infrastructure, driving efficiency, and enhancing user experience. Adept at leading teams, streamlining complex processes, and fostering knowledge-sharing cultures. Passionate about solving real-world problems through technology, security, and strategic thinking.

Key Skills

<ul style="list-style-type: none"><li>Cloud Engineering and Infrastructure</li><li>Security and Compliance</li></ul>	<ul style="list-style-type: none"><li>Technical Leadership and Team Building</li><li>Documentation and Knowledge Sharing</li></ul>	<ul style="list-style-type: none"><li>Cost Optimization and Strategic Planning</li><li>Developer Productivity and Tooling</li><li>Open-Source Development</li></ul>
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Work Experience

Stripe — Remote

Stripe provides a fully integrated suite of financial and payments products.

Senior Technical Program Manager, Databases (March 2025—Present)

- Managed budgets for the Databases organization, ensuring millions of dollars per month were kept "in the green" by diving deeply into erroneous spending (budgeting, business accounting).
- Led internal migration projects, tracking progress and metrics, reducing infrastructure team workload by focusing on automation solutions (project management).
- Streamlined internal-user facing documentation by migrating from multiple systems into a singular system, performing technical editing and leveraging a [Diátaxis](#)-like approach (project management, technical writing).

McGraw Hill — Remote (since COVID), previously Seattle, WA

McGraw Hill is a learning science company which produces textbooks, digital learning tools, and adaptive technology to enhance learning. It is one of the "big three" educational publishers in the U.S.

Principal Engineer, Cloud Architecture (January 2024—October 2024)

- Developed v2 of a project to scan AWS accounts for misconfigurations and vulnerabilities, reducing [AWS Well-Architected](#) review time from 2 weeks to 2 hours, increasing reviews annually.
- Managed the migration from [CentOS](#) to [Amazon Linux](#) before the CentOS end-of-life date, ensuring a supported security posture.
- Proposed and implemented best practices, guardrails, and security measures to ensure a secure and efficient cloud environment, extending these measures to other cloud platforms (Microsoft Azure, Oracle Cloud).
- Skills: [Go](#), [Docker](#), [Terraform](#), [GitOps](#), [AWS](#), [CloudFront](#), [EC2](#), [ECS](#), [EKS](#), [IAM](#), [Lambda](#), [S3](#), platform engineering.

Principal Cloud and Platform Engineer (June 2020—January 2024)

- Led the team supporting all SRE and product engineering teams, scaling core platforms and services during the COVID-19 lockdowns, improving system reliability and scalability, and investing in platform engineering.
- Partnered with Enterprise Architecture and [AWS Professional Services](#) to deploy [Control Tower](#) and [Identity Center](#), lowering costs and enhancing security guardrails.
- Managed the Base [AMI](#) program, integrating best practices from [CIS](#) and security patching, reducing time-to-boot from 4m30s (avg) to 20s (avg) and eliminating engineering toil.
- Conducted scans of our domains and DNS records to obtain a mapping of the company's thousands of active websites, remediating misconfigurations, rotating certificates, and increasing understanding.
- Scanned ~200 AWS accounts for high-priority misconfigurations, vulnerabilities, and cost-savings opportunities.
- Implemented the custom Linux runtime environment used by self-hosted [GitHub Actions](#) runners.

- Spearheaded a project to modernize [Artifactory](#), which significantly improved reliability and ability to detect/mitigate supply chain vulnerabilities. Directed effort across ~80 teams and ~300 services to complete the project.
- Designed and deployed a *Token Vending Machine*, empowering continuous token and password rotation, improving security.
- Adapted our internal observability-as-code framework to abstract-away the underlying vendor, streamlining vendor migrations and preventing vendor lock-in.
- Resolved all technical blockers preventing migration to lower-cost [ARM64](#) CPUs, enabling ~\$450k/year in cost savings.
- Led dozens of smaller projects, offered guidance to engineers on best practices, and authored/edited over 1,800 [Confluence](#) documents with the goal of reducing *tribal knowledge*.
- Regularly helped teams leveraging [Amazon ECS](#) scale their systems and improve their reliability and scalability, while reducing toil.
- Skills: [Artifactory](#), [AWS Identity Center](#), [AWS ImageBuilder](#), [AWS Secrets Manager](#), [AWS](#), [Bash](#), [CIS](#), [CloudFormation](#), [CloudFront](#), [Control Tower](#), [Datadog](#), [Docker](#), [EC2](#), [ECS](#), [EKS](#), [GitHub Actions](#), [GitOps](#), [Go](#), [Gradle](#), [IAM](#), [Lambda](#), [Maven](#), [New Relic](#), [Node.js](#), [Packer](#), [PostgreSQL](#), [Python](#), [S3](#), [Terraform](#), [Ubuntu](#), `kubectl`, `async/concurrency`, cybersecurity, Linux packaging, observability, project management, platform engineering.

## Site Reliability Engineering Manager (October 2018—June 2020)

- Led the [Site Reliability Engineering](#) (SRE) team, focusing on macro-oriented reliability/availability problems and platform engineering principles, improving our ability to scale our human resources.
- Established a process for maintaining reusable Terraform modules (designed as *LEGO blocks*), enhancing infrastructure management and deployment efficiency significantly.
- Reduced time to deploy a new service from several weeks to under 20m by implementing an observability-as-code methodology and defining broad-use [Service Level Objectives](#) (SLOs).
- Customized the [Amazon Linux](#) AMIs to comply with Level-2 [CIS](#) Guidelines for both Amazon Linux and [Docker](#), increasing security and preventing breaches.
- Invented operational tooling to understand the current posture of AWS accounts where off-the-shelf tools did not meet the needs of the organization.
- Skills: [AWS](#), [Bash](#), [CIS](#), [CloudFront](#), [Datadog](#), [Docker](#), [EC2](#), [ECS](#), [GitHub Actions](#), [GitOps](#), [Go](#), [IAM](#), [Lambda](#), [New Relic](#), [Packer](#), [PostgreSQL](#), [Python](#), [S3](#), [Secrets Manager](#), [Terraform](#), `async/concurrency`, cybersecurity, observability, platform engineering.

## Staff Software Engineer (October 2016—October 2018)

- Led the development of Tier-1 services within the educational content authoring pipeline, leveraging technologies such as [REST](#), [GraphQL](#), API design, [Amazon ECS](#) (similar to [Kubernetes](#)), [Docker](#), [Terraform](#), [ePubs](#), and security best practices.
- Led the development of the authoring component of the [SmartBook 2.0 product](#), and the internal system which indexes authored content, builds ePubs, and encodes images/video for the ePub CDN using [ffmpeg](#) and [HLS](#) streaming.
- Established the technical direction of these projects, promoted adoption across the organization, published comprehensive documentation, and offered ongoing integration guidance.
- Accelerated the adoption of CI/CD, rapid deployment practices, and Docker containers, shortening the feedback loop for developers and increasing the reliability of deployments.
- Served as a core resource in adopting *Infrastructure-as-Code* (IaC) tools such as [Terraform](#) and [Packer](#).
- Skills: [Amazon ECS](#), [Docker](#), [ePubs](#), [ffmpeg](#), [GraphQL](#), [Packer](#), [PHP](#), [REST](#), [Terraform](#), observability, technical leadership, technical writing.

## [WePay](#) — Redwood City, CA

*WePay is an online payment service provider which provides "payments for platforms", where examples of platforms were GoFundMe, Care.com, and Xbox. JPMorgan Chase acquired WePay in October 2017.*

## Senior DevOps Engineer (April 2015—September 2016)

- Led a cross-company initiative to upgrade the monolithic application from [PHP](#) 5.4 to PHP 5.6 (the latest at the time). Facilitated cross-team collaboration among all major engineering teams and QA departments to achieve results ([PHP](#), project management).
- Initiated a program to automate the creation of base server images for cloud servers. This allowed new servers to boot and begin serving traffic ~75% faster ([GCP](#), [Python](#), [Ansible](#)).
- Invested in observability systems to prevent customer-facing issues ([New Relic](#), [Grafana](#)).
- Explored *configuration-as-code* for cloud infrastructure in [Google Cloud](#) to improve reliability and efficiency ([Python](#), [Terraform](#)).

## Senior API Engineer (April 2014—April 2015)

- Led the company's [HackerOne](#) security program, coordinating across teams to address security issues.
- Brought performance improvements, new features, improved testing processes, and new QA tooling to WePay ([PHP](#), [BDD](#), [TDD](#)).
- Built a local development environment for engineering teams using [Vagrant](#) and [VMWare Fusion](#). Eliminated "works on my machine", and reduced new engineer onboarding time from 2 weeks to 1 day (measured by when a new employee could make their first commit).

## Older roles, side projects

See "[Previous experience, side projects](#)" for additional details.

- [Northwood Labs](#) — Owner (January 2024—Present)
- PCR Publishing (Side-Project) — Editor, Typesetter, Publisher, Book Producer (April 2021–April 2022)
- Perimeter of Wisdom, LLC (defunct) — Co-Owner, CTO, Producer (February 2015–2018)
- [Amazon Web Services](#) — AWS SDK Developer (March 2010–April 2014)
- Rearden Commerce (now [Deem](#)) — Senior User Experience Developer (July 2008–March 2010)
- [WarpShare](#) (defunct) — Co-Founder and Chief Information Officer (September 2006–March 2010)
- [Yahoo!](#) — Front-end Developer (Contract), Yahoo! Messenger (November 2007–January 2008)
- [Stryker](#) — User Interface Developer (Contract) (May 2005–September 2006)
- [Digital Impact](#) (now part of [Axiom](#)) — Production Specialist (March 2004–April 2005)

## Projects

Proof that I can code, call APIs, interact with SDKs, and build user-facing software.

- **DevSec Tools:** Building a [website](#), [CLI tool](#), and [Go library](#) for identifying potential security configuration issues (in-progress).
- **Custom Linux Packages:** Building a [repository of custom Linux packages](#) (in-progress).
- **Terraform Provider:** Built a [custom provider](#) which provides a set of utility functions for use in Terraform/OpenTofu.
- **Multi-Platform Docker:** Built a [downloader for GitHub release assets](#) which simplifies building multi-platform images.
- **AWS Organization Security:** Built a [library + CLI tool](#) which simplifies the hub-and-spoke pattern for multi-account orgs.
- **AWS Session Manager:** Built a [TUI](#) for [simplifying connections to SSM-enabled EC2 instances](#) using your Terminal.

## Examples of Technical Documentation

Here are examples of my public-facing documentation:

- [Setting up macOS for development](#)
- [Local AWS Lambda environments \(with Go\)](#)
- [Local development environment \(devsec-tools\)](#)
- [Configuring DataGrip for Valkey \(devsec-tools\)](#)
- Diagrams of Artifactory [infrastructure](#) and [software](#) configuration.
- Diagram of a [secrets-rotation system](#).

## Recommendations

See a [selective list of recommendations](#) from co-workers and peers.

## Patents and Notable Open-Source

- U.S. patent filing, "[System and Methods for User Authentication across Multiple Domains](#)" (US15042104) (2016)
- U.S. patent filing, "[Hive-based Peer-to-Peer Network](#)" (US8103870B2) (2007)
- [SimplePie](#) — An RSS parser for PHP; founded in 2004; integrated into [WordPress](#) core since 2009. Millions of global users.
- [CloudFusion](#) — A PHP SDK for AWS; founded in 2005; later became the official [AWS SDK for PHP](#). Millions of global users.

## Skills

This list is not exhaustive, but these are software and hard skills I leveraged in the roles above which are most relevant to Cloud Engineering, DevOps, and Site Reliability Engineering roles.

CI/CD, Cloud Engineering, DevOps, DevSecOps, Platform Engineering, Site Reliability Engineering, [ARM64](#), [AWS Well-Architected](#), [Amazon Web Services](#), [Ansible](#), [Artifactory](#), [Bash](#), [CIS](#), [CentOS](#), [CircleCI](#), [CloudFormation](#), [CloudWatch](#), [Control Tower](#), [Datadog](#), [Docker](#), [ECS](#), [GitHub Actions](#), [GitHub Enterprise](#), [GitOps](#), [Git](#), [Go](#), [JavaScript](#), [Lambda](#), [New Relic](#), [Nginx](#), [OpenTelemetry](#), [OpenTofu](#), [PHP](#), [Packer](#), [Python](#), [Redis](#), [SDKs](#), [Terraform](#), [Traefik](#), architecture, automation, disaster recovery, distributed systems, encryption at rest, error budget, fault tolerance, multi-platform, performance, reliability, scalability, scripting, security, troubleshooting, uptime.

## Education

*Silicon Valley College* (now [Carrington College](#)), San Jose, CA. Bachelor of Arts, *Design and Visualization*