

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.
- 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.
- Spearheaded a project to modernize [Artifactory](#), which significantly improved reliability and ability to detect/mirigate supply chain vulnerabilities. Directed effort across ~80 teams and ~300 services to complete the project.

- Adapted our internal observability-as-code framework to abstract-away the underlying vendor, streamlining vendor migrations and preventing vendor lock-in.
- 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 of 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.
- Skills: [Amazon ECS](#), [Docker](#), [ePubs](#), [ffmpeg](#), [GraphQL](#), [HLS](#), [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).
- Expanded WePay's payment security offerings by designing MFA-as-a-Service (U.S. patent filing [US15042104](#)).

## 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 Software Engineering and DevTools roles.

CI/CD, [AWS](#), [Bash](#), [CircleCI](#), [Docker](#), [GitHub Actions](#), [Git](#), [Go](#), [GraphQL](#), [HLS](#), [JWT](#), [JavaScript](#), [PHP](#), [Python](#), [Redis](#), [Vagrant](#), [ffmpeg](#), [twelve-factor applications](#), automation, code generation, concurrency, containerization, debugging, documentation, microservices, multi-platform, optimization, performance, platforms, refactoring, scalability, security, test-driven development, testing.

## Education

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