

Jonathon W. Marshall

jonathon.marshall@gmail.com | jwmarshall.dev | [LinkedIn](#)

Platform Infrastructure Engineer

Expert Platform Infrastructure Engineer dedicated to architecting scalable, secure, and production-ready systems for AI-driven organizations. Specialized in building resilient platforms that accelerate rapid AI prototyping and integrate advanced agentic development workflows for enterprise reliability.

Technical Skills

- **Operating Systems:** Linux, FreeBSD, MacOS
- **Languages:** Python, TypeScript, Go, PHP, Elixir/Phoenix
- **Infrastructure:** GCP, AWS, Azure, Kubernetes, Terraform, Docker, LXC, Jails
- **CI/CD & Data Ops:** GitHub Actions, Helm, Kustomize, Prefect, AlloyDB, Spanner
- **Artificial Intelligence:** LLMs, Claude Code/Cursor, RAG, MCP, Eval, Sandboxing

Key Achievements

- **Scalable Platform Infrastructure:** Scaling multi-cloud enterprise infrastructure to 30+ Kubernetes clusters (100s of nodes) processing and serving a corpus of 10M+ biological publications. Reduced total deployment time by 20% by re-architecting release workflows using Prefect.
- **Security & Reliability:** Unlocking ISO 42001:2023 compliance for handling highly sensitive Big Pharma biological data by pioneering enterprise AI guardrails. Secured enterprise developer toolchains (Claude/Cursor) to prevent malicious tool calls. Hardened agent code-execution sandboxes through extensive red-teaming against sandbox escapes and data extraction.
- **AI & Agentic Systems:** Architecting an autonomous “upskill” framework and standardized meta-critique rubrics, enabling dynamic AI skill creation. Ported advanced agentic capabilities to non-technical staff via Claude Cowork, scaling self-learning AI across the enterprise.
- **Developer Experience (DevEx):** Reducing stale code review bottlenecks and increased merge confidence for large codebases by designing domain-scoped automated PR agents. Facilitated the secure adoption of AI developer tools for 250+ cross-functional staff.

Professional Experience

BenchSci – Senior Software Engineer, Platform Infrastructure | March 2022 – May 2026

- Engineer production-grade infrastructure and CI/CD pipelines using GCP, GitHub Actions, Prefect, Terraform, and Kubernetes for AI-driven biological research tools and advanced “co-scientist” agents backed by a public corpus of over 11 million documents serving top 25 Big Pharma clients.
- Responsible for release and incident on-call processes for three generations of single-tenant products, ensuring high throughput for complex biological knowledge graphs and data pipelines.
- Champion of the Artificial Intelligence Developer Experience (AIDE) group; author and maintain version-controlled AI guardrails (managing tools, MCPs, and plugins) deployed company-wide.
- Design self-learning agent evaluation systems using N-dimensional meta-critique rubrics, allowing LLMs to autonomously optimize prompt effectiveness and skill execution. Agents actively review user conversations to extract and codify knowledge, decisions, and preferences into skills.
- Build custom domain-scoped automated code reviewers via GitHub Actions using a custom prompting framework and empower individual teams to tune review agents to their specific needs, significantly reducing developer toil and increasing release confidence.
- Perform continuous red-teaming and security testing on agentic workflows and code-execution sandboxes to ensure enterprise data safety and system integrity.

Intersect – Senior Professional, Development Operations | *March 2017 – March 2022*

- Architected and deployed tailored cloud and hybrid infrastructures across GCP, AWS, and bare metal to drive high-performance development and production environments for top-tier clients including TD Bank, Facebook, and Walmart.
- Partnered with cross-functional technical leadership to facilitate project discovery and solutioning, ensuring proactive technical planning and seamless product integration for enterprise-scale proposals.
- Streamlined initial engineering overhead by 90% through the development of automated environment templates, integrating standardized CI/CD pipelines and backend services optimized via iterative retrospective feedback.
- Standardized operational documentation and engineering workflows to empower developer self-service, reducing onboarding time for new hires by 2-3 days.
- Instituted rigorous ISO compliance frameworks for network security, data storage, and observability, reinforced by regular self-administered security audits.

Big Viking Games – DevOps, Data Team | *January 2016 – March 2017*

- Designed and managed bare metal Docker Swarm clusters to ingest massive event logs, utilizing a robust data stack using Airflow, PostgreSQL, Spark, and InfluxDB to deliver actionable audience analytics and insights.
- Engineered a near real-time analytical platform processing 10M+ daily in-game events using Kafka, ElasticSearch, and Amazon S3 to provide high-fidelity visualization through Grafana and Tableau.

GALLOP LABS – DevOps / System Engineer | *October 2014 – January 2016*

- Orchestrated AWS Hadoop clusters to process complex Facebook advertising data, generating critical performance metrics and automated campaign recommendations for enterprise customers.
- Developed and maintained scalable web applications to facilitate advertising account integration, audience modeling, and real-time campaign analytics.

BNOTIONS – DevOps / Systems Engineer | *August 2013 – October 2014*

- Implemented custom AWS infrastructure solutions to accelerate project delivery for diverse clients such as TD Bank, Royal Bank (RBC), Indigo, Johnson & Johnson, and Facebook. Projects include financial services, e-commerce, loyalty platforms, and rapid mobile prototyping.
- Advocated for DevOps principles within the Toronto tech community as a panelist and host, presenting on configuration management, cloud reliability, and deployment automation.

Projects

Project Phoenix – Project Director & Technical Lead

The technical and strategic revival of a 32-year online legacy from a vulnerable subculture media archive into a modern community platform. Cloud-agnostic infrastructure built for resilience and portability with a design philosophy that rejects corporate web standards.

Scopewright – Creator – Agentic Coding

A Claude Code skill and framework that builds review subagents tailored to your project. Scopewright prescribes the structure: dependency-ordered evaluation, strict read-only constraints, prompt-injection defenses, and clear verdict authority.

