

Daniel Smith

Senior Backend Platform Engineer • AI Agents & MCP • Kubernetes & Cloud Infrastructure

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Experience

Phantom | Senior Backend Platform Engineer

July 2024 - Aug 2025

Typescript, Rust, AWS, Cloudflare, Kubernetes, Istio, ArgoCD, Kafka, CockroachDB, DragonflyDB, Datadog, Karpenter, GitHub Actions, Pulumi, PagerDuty, Chaos Mesh, K6, ClickHouse, Wiz, Okta, OpenAI, Onyx, Flink

- Developed the AI support bot with OpenAI for Platform team to quickly triage and assign issues to on-call engineer as well as the AI RAG Knowledge bot using Onyx and Flink for coworkers to use and get up to date information across entire company Slack, Notion, Github, and other data sources.
- Architected and migrated to a resilient multi-region stack (Kubernetes, Istio, CockroachDB) with full failover for extended regional outages.
- Redesigned global deployments to be modular by team/service so teams owned services end-to-end and rollbacks stayed isolated.
- Led workshops on critical topics; raised CoreDX scores for Ease of Deployment and Production Debugging by 125% and 133%.
- Ran K6 load tests against production-like traffic and used Chaos Mesh for failure/recovery drills. Migrated Lambda workloads to Kubernetes, right-sized EKS and related AWS usage, and cut overall cost ~65% after cutover.

DraftKings | Senior Blockchain Systems Engineer

Jan 2022 - Mar 2023

Golang, Rust, Solidity, AWS, Kubernetes, Jenkins, Terraform, Ansible, Rapid7, Datadog, The Graph, Chainlink, Ethereum, Polygon, Slither, Manticore, Echidna

- Indexed on-chain events and served them internally via GraphQL (The Graph) for the consumer NFT product and wallet analytics.
- Architected multi-chain indexing plus Chainlink guardian patterns for internal and consumer surfaces.
- Operated Marketplace infrastructure: Ethereum/Polygon nodes, oracles, and indexing pipelines.

Upgrade Inc | DevOps Engineer (SRE)

Sep 2020 - Dec 2021

Golang, AWS, Kubernetes, Helm, Istio, Argo CD, Jenkins, Terraform, Ansible, Packer, Twistlock, CloudWatch, Prometheus, Grafana, Jaeger, Honeycomb, Docker Notary, Vault

- Built progressive delivery on Kubernetes/Istio with Argo for controlled rollouts and lower blast radius.
- Implemented canary analysis wired to Prometheus, CloudWatch, and custom jobs before Istio traffic shifts and roll-forward.
- Drove zero-trust patterns: short-lived Vault creds, hardened AMIs/images (Ansible/Packer), Twistlock scanning, and admission-level image signing.

IBM Blockchain | Financial Blockchain Operations Engineer

May 2018 - Aug 2020

Golang, TypeScript, AWS, GCP, IBM Cloud, Kubernetes, Helm, Istio, Flux, Jenkins, Terraform, Ansible, Packer, Twistlock, Sysdig, LogDNA, Grafana, Prometheus, Vault

- Implemented the state machine behind the Sand Dollar CBDC pilot (Bahamas), bridging domestic and international asset flows.
- Improved HA/DR and compliance for payments and supply-chain platforms across clouds; blue/green updates with region/AZ failover.
- Led immutable IaC with Terraform/Ansible; instrumented Stellar validator nodes for logs, metrics, and faster incident response.

Open Source and Projects

ClawQL | docs.clawql.com

github.com/danielsmithdevelopment/ClawQL

Production TypeScript MCP server giving AI agents structured, token-efficient access to APIs, documents, and enterprise knowledge. Ships a GraphQL projection layer for lean responses; 9+ bundled API providers (Google Cloud, GitHub, Cloudflare, Slack, and more); a durable Obsidian vault memory system with keyword and graph traversal recall; a full document pipeline (Apache Tika → Gotenberg → Stirling-PDF → Paperless NGX); and Onyx semantic search integration. Also used to bootstrap and manage the CoachellaPlus deployment via Cloudflare and GitHub APIs. Deployable via npx, Docker, or Kubernetes Helm chart. Extended with a JS skill bridge enabling local on-device Gemma 4 models to call remote ClawQL MCP servers from mobile. Strong Defense-in-Depth and zero trust approach to security.

Coachella Plus | coachellaplus.com

github.com/danielsmithdevelopment/CoachellaPlus

Full-stack festival planning PWA with a production AI layer. Hybrid retrieval system combining structured JSON and SQLite token embeddings with reranking, mapped intents, and OpenRouter LLM integration. Tavily agentic web search as an automatic fallback for knowledge gaps — with a quality-gated self-improving knowledge base: web search results are persisted and re-embedded only if benchmark scores improve. Group coordination with private chat, shared setlists, one-tap water reminders, and live location sharing. Swipe-based artist set builder, conflict detection and resolution, calendar export (.ics), push notifications, and a food vendor guide. Installable PWA achieving Lighthouse 90+ across all categories including full WCAG accessibility compliance. Deployed and managed entirely via ClawQL search/execute calls to Cloudflare and GitHub APIs.

mcp-grpc-transport

<https://www.npmjs.com/package/mcp-grpc-transport>

First TypeScript/Node.js gRPC transport for the Model Context Protocol, filling a gap in the official MCP TypeScript SDK which ships only stdio and Streamable HTTP. Provides protobuf payloads, unary and bidirectional streaming, grpc.health.v1 health probes, mTLS, and enterprise Kubernetes deployment support. Published after Google's Python gRPC MCP contribution, ahead of any TypeScript equivalent.

clawql-ouroboros

<https://www.npmjs.com/package/clawql-ouroboros>

Pluggable TypeScript evolutionary loop library — a portable subset of the Q00/Ouroboros Python architecture. Typed Executor, Evaluator, Wonder, and Reflect phase interfaces; ontology convergence detection with stagnation, oscillation, and regression gates; Postgres-backed append-only event sourcing; InMemoryEventStore for tests; MCP-shaped tool hooks (createSeedFromDocument, runEvolutionaryLoop, getLineageStatus); and a background seed poller with configurable batch sizing.

panguard-mcp-bridge

github.com/danielsmithdevelopment/ClawQL/packages/panguard-mcp-bridge

Production Streamable HTTP MCP gateway (optional gRPC via mcp-grpc-transport) that exposes /mcp to clients or a service mesh while keeping @panguard-ai/panguard-mcp-proxy on the stdio path and terminating on remote clawql-mcp-http. Spawns Panguard with a stdio MCP shim that bridges upstream over Streamable HTTP so policy stays at the proxy and discovery/execute stays in ClawQL. Optional JWT verification (JWKS RS256, Bearer on HTTP and gRPC metadata) plus a configurable atr-shaped claim hook for OIDC-style meshes (see ClawQL mcp-proxy-jwt-atr). Ships clawql-panguard-bridge-gateway / clawql-panguard-bridge-shim, a Dockerfile, and Helm mcpProxy.mode: custom on the clawql-mcp chart.