

IAN DOUGLAS

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Platform Engineer | Security Architect

Delivering scalable secure solutions that transform business strategy into adaptive, automated architecture with just enough human-in-the-loop.

EXPERIENCE

FlowDelta Trading Software Engineer

03/2025 – Present

- **Quantitative Development:** Developing a multi-horizon, medium-frequency (MFT) strategy analysis platform using Python, Pandas, and VectorBT Pro.
- **Probabilistic Modeling:** Validating strategy robustness via Monte Carlo simulations on synthetic time-series data to model volatility-clustering.
- **Strategy Automation:** Partnering with traders to transform trading strategies into testable, automated trading systems.
- Stack: Python, Pandas, VectorBT Pro, Monte Carlo Simulations, Synthetic Time-Series modeling.

Kings Mountain Security Security Architect & Staff Engineer

01/2025 – Present

- **Strategic Advisory:** Co-founded a zero-trust specialized security consultancy based in Palo Alto delivering 'Zero Trust Capability Packages' via tactical, high-impact engagements.
- **Compliance Automation:** Developing progressive 'Security-as-Code' modules to automate DoD Zero Trust compliance within modern infrastructure lifecycles.
- **Platform Delivery:** Implementing container-based CI/CD pipelines for high-integrity, secure web deployments.
- Stack: Zero Trust Frameworks, Security-as-Code, Containerization, CI/CD, Astro.

ZagTech Senior Platform Engineer

04/2024 – 12/2024

- **Modular Infrastructure:** Architected and authored Azure IaC to deliver Azure Kubernetes (AKS) and VM Scale Sets (VMSS) as scalable, modular service stacks.
- **Developer Velocity:** Increased deployment speed and reduced operational risk by implementing GitOps workflows and custom tooling in Go and Python.
- **Acquisition & Transition:** Facilitated the technical architectural handover during acquisition by a national MSP; declined a retention offer to launch Kings Mountain Security.
- Stack: Azure (AKS, VMSS), Terraform, Go, Python, GitOps.

Invitae Biosciences Senior Platform Engineer

07/2023 – 04/2024

- **Internal Developer Platform:** Delivered Internal Developer Platforms (IDP) to genetics researchers, medical scientists, and software developers
- **Resilient Operations:** Executed zero-downtime Kubernetes upgrades and stateful workload migrations using Jenkins, Terraform, Terragrunt, and Flux CD.
- **Production Hardening:** Developed Cluster Security Audit tooling to perform Day Zero hardening and CIS compliance for petabyte-scale genomics data flows.
- **Secrets Management:** Designed an enterprise secrets-management solution leveraging SOPS, AWS KMS, and Shamir Sharding
- **Corporate Restructuring:** Tenure concluded due to corporate insolvency following adverse IP litigation regarding core technology.

- Stack: Kubernetes, Flux CD, Terraform, Terragrunt, SOPS, AWS KMS, Python.

Pearson

09/2019 – 08/2021

Senior Cloud Platforms Engineer

- **Internal Developer Platform:** Developed and operated Internal Developer Platforms (IDP) via self-hosted Kubernetes clusters on AWS EC2 in a continuous delivery GitOps model.
- **Distributed Observability:** Engineered a scalable log aggregation solution leveraging Fluentd, Python, AWS Lambda, and Elasticsearch.
- **Infrastructure Lifecycle:** Developed EKS cluster modules in collaboration with colleagues as part of an initiative to migrate to AWS Elastic Kubernetes Service
- **Platform-as-Product Delivery:** Engineered with colleagues an automated CI/CD lifecycle that graduated versioned infrastructure changes from pre-production to production multiple times daily; utilized feature flags and rigorous SDLC patterns to treat the platform as a discrete product.
- Stack: Self-hosted K8s, AWS (EC2, EKS, Lambda), Terraform, Terragrunt, Go, Ansible, Python, Fluentd, Elasticsearch.

Stanford University

12/2015 – 09/2019

DevOps Engineer | Security Architect

- **Identity Modernization:** Partnered with IAM teams to transform Identity services (LDAP/Kerberos) into containerized workloads on **self-hosted Kubernetes**.
- **Cloud Transformation:** Provided solutions leveraging cloud services and Kubernetes to teams across the University as part of a six-person team.
- **Zero-Trust Architecture:** Authored a reference implementation for cloud-resident Active Directory via IPv6 / IPsec mesh
- **Secrets Management:** Managed Vault clusters as part of a three-person team, providing multi-tenant PKI, authentication proxies, and encrypted storage.
- **Alignment & Hardening:** Coordinated a university-wide hardening initiative, aligning technical implementers across diverse IT units to secure critical assets.
- **Anomalous Threat Detection:** Partnered with security colleagues to deploy and tune machine-learning-based event anomaly detection systems.
- Stack Self-hosted K8s, HashiCorp Vault (PKI), OpenLDAP, Kerberos, IPsec, IPv6, AWS, Python.

Marvel Heroes (Gazillion Entertainment)

06/2014 – 12/2015

DevOps Engineer

- **High-Concurrency Scaling:** Supported DevOps for a flagship title with 40k+ Daily Active Users (DAU) and weekly production releases.
- **Database Orchestration:** Mechanized complex schema changes and SQL management tasks via PowerShell remoting to unblock high-velocity release cycles.
- **Performance Tooling:** Rewrote cluster operations tools from Python to PowerShell, reducing service drain times from 6 minutes to 25 seconds.
- Stack PowerShell, SQL Server, Puppet, Python, Elasticsearch, .NET management libraries.

Two Sigma

05/2012 – 06/2014

Systems Engineer

- **Fleet Automation:** Automated the image build, deployment, and configuration of high-performance servers and database systems for a top-tier quantitative hedge fund.
- Stack Bare-Metal Provisioning, PowerShell, Python, Automation Tooling.

Columbia University

06/2010 – 05/2012

Systems Engineer

- **Infrastructure Management:** Ran ESX, storage, and VM infrastructure supporting Columbia's 22 libraries.
- Stack VMware ESX, Storage Area Networks (SAN), Bare-Metal.

SKILLS

Orchestration: AKS, CI/CD Pipelines, Docker, EKS, GKE, Kubernetes, Self-Managed Kubernetes, VM Scale Sets

IaC & Automation: Ansible, CI/CD, Flux CD, Helm, Packer, PowerShell DSC, Puppet, Terraform, Terragrunt

Security & Identity: Active Directory, AWS IAM, Entra ID, HashiCorp Vault, IPSEC, Kerberos, PKI, Zero Trust

Languages: Bash, Go, Lua, Lua, PowerShell, Python, Shell, SQL, Wolfram Language

Data Systems: AWS Lambda, CosmosDB, Elasticsearch, LMDB, MongoDB, MS SQL, OpenLDAP, PostgreSQL

Cloud: AKS, AWS, Azure, Azure Kubernetes, EKS, ESX, GCP, GKE, Google Kubernetes Engine, Hybrid, Kubernetes

EDUCATION

The University of Denver

Bachelor of Arts (BA), Double Major: Mathematics & Philosophy

Denver, CO

- **Mathematics:** Completed full **Bachelor of Science (BS)** curriculum plus five upper-division courses beyond degree requirements.
- **Philosophy:** Specialized in Logic and Epistemology.
- **English & Creative Writing:** Completed all major requirements; equivalent to a Third Major.