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 **03/2025 - Present**
Software Engineer

- **Quantitative Devlopment**: 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 **01/2025 - Present**
Security Architect & Staff Engineer

- **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 **04/2024 - 12/2024**
Senior Platform Engineer

- **Acquisition & Transition**: Facilitated the technical architectural handover during acquisition by a national MSP; declined a retention offer to launch Kings Mountain Security.
- **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.
- Stack: Azure (AKS, VMSS), Terraform, Go, Python, GitOps.

Invitae Biosciences **07/2023 - 04/2024**
Senior Platform Engineer

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

Pearson **09/2019 - 08/2021**
Senior Cloud Platforms Engineer

- **Self-Hosted Kubernetes**: Operated Internal Developer Platforms (IDP) managing self-hosted Kubernetes clusters on AWS EC2 via a 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 from self-hosted Kubernetes on EC2 clusters 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 architect transition of Identity services (LDAP/Kerberos) to self-hosted Kubernetes.
- **Infrastructure Enablement**: Delivered the foundational "vanguard" Identity stack required by all subsequent core infrastructure teams during the cloud transformation initiative.
- **Stateful Orchestration**: Engineered replication logic, automated DB restoration, and CI/CD pipelines for multi-master LDAP and Kerberos services.
- **Secrets Management**: Managed Vault clusters as part of a three-person team, providing multi-tenant PKI, authentication proxies, and encrypted storage.
- **Zero-Trust Architecture**: Authored a reference implementation for cloud-resident Active Directory via IPv6 / IPsec mesh
- **Internal Recruitment**: This foundational architecture served as a catalyst for recruitment to the central Cloud Engineering team.
- **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.