IAN DOUGLAS

SECURE PLATFORM ENGINEERING │ EVERYTHING-AS-CODE

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EXPERIENCE

Kings Mountain Security
January 2025 – Present

Security Architect & Founder

- Co-founded this zero-trust specialized security consultancy and serves as staff engineer
- Developed a comprehensive suite of security-as-code packages for achieving DoD / NIST Zero Trust architecture
- Implemented container-based CI/CD pipeline to automate the release and deployment of an Astro-based website

FlowDelta Trading
March 2025 – Present

Software Engineer

- Building comprehensive strategy analysis platform with Python and VectorBT
- Implemented a robust Monte Carlo analysis framework for complete strategy performance analysis
- Collaborates closely with traders to transform strategy concepts into testable algorithms and automated trading systems

ZagTech
Apr 2024 - Dec 2024

Senior Platform Engineer

- Platform Engineer for the Architecture Team at this MSP, focusing on Azure IAC and Kubernetes.
- Architected and authored IAC code for delivering Azure Kubernetes (AKS) and VM Scale Set (VMSS) Clusters as modular service-stacks, for clients engaged in cloud transformation.
- Delivered automation capabilities using both GitOps and CI/CD pipelines, as well as custom tooling using Go, Python, PowerShell, Bash, and Terraform, increasing velocity while reducing risk.

Invitae Biosciences
Jul 2023 – Apr 2024

Senior Platform Engineer

- Delivered platform services to genetics researchers, medical scientists, and software developers at this San Francisco Biotech, as part of a core team specializing in Kubernetes, Flux CD, and container builds.
- Performed regular Kubernetes cluster upgrades using Jenkins pipelines, Terraform, Terragrunt, and Flux.
- Implemented a secrets-management solution using SOPS, AWS KMS, and Shamir Sharding.
- Developed CLI tooling in Python to audit Pod Security configurations and mechanize PSP migration.

Pearson
Sep 2019 - Aug 2021

Senior Cloud Platforms Engineer

- Delivered Kubernetes and diverse cloud services to software teams in the US, UK, and Asia while serving as a Senior Platform Engineer for Pearson's Cloud Engineering team.
- Operated the company's Internal Developer Platform, comprising 'self-hosted' Kubernetes clusters on AWS EC2, deployed continuously in a 'Platform as product' GitOps model with Gitlab and Argo CD.
- Extended the codebase using Terraform, Terragrunt, Golang, Helm, Ansible, Python, and Bash.
- Implemented a log aggregation solution with Fluentd, Python, AWS Lambda, & Elasticsearch.
- Coded components of an EKS cluster lifecycle module as part of a re-design to use AWS EKS.

Stanford University
Jun 2017 - Sep 2019

DevOps Engineer

- Provided solutions leveraging cloud services and Kubernetes to teams across the University while serving as a DevOps Engineer for Stanford IT's foundational cloud engineering team.
- Served as one of the technical leads on a major project to re-architect the University's Identity & Access Management stack as Kubernetes services, as part of a multiyear cloud transformation initiative.
- Operated Vault clusters providing multi-tenant secrets store, automated PKI, authentication proxy, and secrets backends for Kubernetes clusters as part of a three-person team.
- Ran self-hosted Kubernetes clusters on AWS EC2 / GKE as part of 3-person team

Stanford University
Dec 2015 - Jun 2017

Infrastructure Security Architect

- Delivered the architecture and codebase for an isolated domain deployment of Cloud-resident Active Directory, enabling Stanford to serve AD securely over IPv6 internet.
- Collaborated with colleagues to deploy and tune ML-based event anomaly and threat detection systems.

Marvel Heroes
Jun 2014 - Dec 2015

DevOps Engineer

- Provided DevOps engineering to Marvel Heroes, the flagship game of a $250M startup with 40000 DAU.
- Developed a module to mechanize complex database changes critical to a weekly production release.
- Contributed to PowerShell modules orchestrating Game Cluster lifecycle operations.
- Rewrote Python tools using PowerShell, reducing cluster drain from 6 minutes to 25 seconds.
- Authored a Puppet module for installing and configuring a 16-node Elasticsearch cluster.

Two Sigma
May 2012 - Jun 2014

Systems Engineer

- Implemented a machine deployment and configuration service spanning 3 datacenters and multiple distribution points while serving as Systems Engineer for a Top-3 quantitative hedge fund.
- Automated the image build, deployment, and ongoing configuration of high-performance bare-metal servers, including database servers and other critical systems.

Columbia University
Jun 2010 - May 2012

Systems Engineer

- Ran ESX, Storage, VMs, and bare metal in support of Columbia's sprawling 22-site library system.

SKILLS

Cloud: Azure, AWS, GKE
Languages: Golang, Python, Bash, PowerShell, SQL
Containers/Orchestration: Kubernetes, Docker, EKS, AKS, Helm
IaC/Automation: Terraform, Terragrunt, Ansible, Puppet, Packer
CI/CD/GitOps: Jenkins, GitLab, Argo CD, Flux CD, GitOps
Security: HashiCorp Vault, Vault PKI, PKI, SOPS, AWS KMS, Zero Trust
Identity: Active Directory, Azure Entra ID, IAM
Databases: PostgreSQL, MongoDB, Elasticsearch
Infrastructure: VMware ESX, VM Scale Sets, Bare Metal
Specialized: VectorBT, Monte Carlo Analysis, Astro, Fluentd

EDUCATION

The University of Denver

Bachelor's Degree
Mathematics & Philosophy, Double Major