

# COPELAND ROYALL

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[copey.dev](https://copey.dev)

## SKILLS

**Languages** Python, TypeScript, Go

**Software** GCP, AWS, Kubernetes, Linux, Terraform, Pulumi, Ansible, Flux CD, GitHub Actions, Docker, Git

## EXPERIENCE

### DevOps Engineer Consultant

January 2025 – present

Utilized AWS and Infrastructure as Code (IaC) expertise to build secure cloud platforms for growing engineering teams.

#### *Opinion Health*

- Implemented Terraform AWS IaC for multi-region private database storage and access
- Deployed virtualized Python client and RDS Postgres with CI/CD GitHub Actions pipeline using tfint, Checkov and TruffleHog for automated quality and security checks

#### *Stealth Startup*

- Developed multi-account, -region and -environment AWS platform using TypeScript/Node.js Pulumi IaC
- Deployed 6 containerized Go apps using App Runner, RDS Aurora, SOPS and Secrets Manager

### Visa Software Engineer

September 2023 – May 2024

Accelerated payment product rollouts on GCP with TypeScript IaC and deployed unified cost monitoring across org.

- Implemented TypeScript Pulumi IaC package to repeatably deploy 256 Pulumi resources across 4 Google Cloud (GCP) projects, meeting Payment Card Industry compliance, reducing deployment time and automating manual steps; also wrote packages for managing GKE, IAM and KMS resources
- Developed Pulumi packages with comprehensive unit testing using Mocha and Chai and created multi-language SDKs enabling TypeScript, Go and Python use cases
- Coordinated and deployed Cloudability FinOps in production projects; calculated 10% cost savings in 45 projects
- Installed and updated Kubernetes cluster addons using Argo CD, Kustomize and Helm
- Migrated Concourse CI pipelines to new load-test platform

### Visa DevOps Engineering Intern

Summer 2022

Created foundational AWS Terraform modules and development processes.

- Developed Terraform modules for RDS Aurora and ElastiCache Redis for standardized multi-team use, including best practice configuration for enforced quality
- Created Windows Terraform Enterprise and tfsec development workflow using Docker and WSL

### Tangible AI Natural Language Processing Intern

Summer 2021

Contributed Python ML-driven positivity-ranking news reader feature to open-source chatbot.

- Generated training data using Facebook and web scrapers for news article text and post reactions
- Trained TFIDF vectorizer and multi-output ridge regression model for positivity prediction, achieving a significant  $R^2$  (model fit) score of 0.61, and an end classifier model for personalized recommendations

## EDUCATION

**University of Edinburgh** BSc Computer Science, First-class honors (GPA: 4.0)

2019 – 2023

Classes: Extreme computing (distributed systems, Hadoop), Arduino metal detector for robot, Haskell gravity sim

#### Dissertation:

- Microservices and message queue-based multi-receiver ADS-B aircraft tracking data aggregation system
- Written in Go, utilizing Apache Kafka, MongoDB and GraphQL, achieved 10ms end-to-end latency

## HOMELAB

### Kubernetes Cluster

- Multi-network K3s cluster deployed with Flux CD, Ansible, GitHub Actions, Linkerd, ingress-nginx, Nginx, cert-manager, Prometheus/Grafana stack, SOPS (secrets), Helm, Ubuntu, Cloudflare, Tailscale
- [Severance-inspired JavaScript + WebGL website](#) for fans of TV show, reaching 4,000 visitors
- [Python + Flask proxy service](#) for streaming podcasts through VPN server to change advert languages
- Empowered Siri with local aircraft tracking, achieving over 18,500 downloads from public image repository

## INTERESTS

[Long-distance bike touring](#), mountain biking, camping, aviation, guitar