

# Kalindu De Costa

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## Summary

- 6+ years of infrastructure and backend engineering experience
- Expertise in Kubernetes, DevOps, Cloud Native Development, Platform architecture

## Experience

### Senior Infrastructure Engineer | Shopify - Team Edge Infrastructure

May 2021 - Present

— Tech Stack: *Kubernetes, Terraform, NGINX, Envoy, GoLang, Ruby, Python, Lua, GitOps, GCP*

- Designed and implemented Kubernetes-based routing solution, leveraging ingress-nginx for east-west and north-south traffic across 1,500+ applications and 3,000+ domains, supporting a sustained 40M RPM
- Led the migration of 1,000+ internal applications from Shopify's bespoke routing layer to GCP application load balancers, reducing latency by 20ms (p50) and saving \$20K/month in compute costs by offloading 10M RPM
- Deployed and configured Cloudflare as a unified edge platform for Shopify, implementing custom dynamic WAF rules, business logic through workers, and CDN delivery for millions of merchants' static assets
- Authored robust and modular IaC using Terraform to manage GCP resources, including GKE, Cloud Storage, and Cloud Load Balancers, supporting scalable and secure infrastructure for 100s of development teams
- Owned the design and implementation of CI/CD pipelines using GitHub Actions, deploying to advanced GCP services like Service Extensions with WASM plugins, streamlining deployments unifying deployment process for the whole team while greatly improving development workflow and reducing deploy times
- Championed the implementation of location-aware routing with regional affinity for critical merchant facing applications, reducing average latency by 60ms by serving requests as close as possible to the clients
- Experienced in providing on-call support for critical systems ensuring high availability and rapid incident resolution across the organization

### IIDR Data Replication Software Developer | IBM Canada

Apr 2019 - May 2021

— Tech Stack: *Java, Python, Kafka, MySQL, Oracle, zOS*

- Direct work with IBM cloud with Kubernetes / Terraform to automate operation process for CDC Cloud
- Worked largely towards the CDC for Kafka offering including Kafka Custom Processing Operator to replicate database changes as they happen and delivers them to Kafka as a target
- Attended to customers directly (L2/L3) through Salesforce, found and resolved product defects and wrote private and public documentation which eased the day-to-day development for the customers and the team

## Education

### University of Toronto – Honours Bachelor of Science (B.Sc.)

- Computer Science, specializing in Software Engineering (Co-op)

## Projects

### Homelab – in-home mini datacenter with custom VPCs

Kubernetes, Ansible, Python / Shell

- A fully functional mini datacenter with a SFF kubernetes cluster and a SBC PI cluster for deploying services like a recursive DNS sinkhole, highly available HASS deployment and NixOS based bootstrapping for all devices