

Nguyen Hoang Phung

Senior DevOps Engineer | SRE | AI Engineer

📞 0385364423 📩 hphung99.work@gmail.com 💬 https://linkedin.com/in/hphun9 📍 Ho Chi Minh, Vietnam

OBJECTIVE

Senior DevOps/SRE with 5+ years delivering cloud-native platforms on GCP/AWS. I design and automate infrastructure with Terraform, Kubernetes (GKE), Helm, and Argo CD; apply SRE practices (SLAs/SLOs, error budgets) with full-stack observability (Prometheus, Grafana, Loki/Tempo, OpenTelemetry). I build resilience via KEDA-driven event autoscaling (with HPA), queue/backpressure, and graceful degradation. Freelance portfolio includes a banking platform hardening project and two AI deliveries; now expanding into MLOps with a trajectory toward Solution Architect.

EDUCATION

Ho Chi Minh City University of Technology, HCMUT Aug 2017 - Apr 2023

Bachelor of Engineering - Electrical, Electronic and Communications

Massachusetts Institute of Technology May 2025 - Present

MicroMasters Program in Statistics and Data Science

HarvardX University Apr 2021 - Mar 2022

Professional Certificate

WORK EXPERIENCE

Freelance / Contract Work (2025) Apr 2025 - Present

Senior DevOps Engineer | Fullstack Developer | Flutter Developer | AI Engineer | Assistant Manager

Provide site reliability, cloud platform engineering, and cost governance for regulated **banking/payments**, **e-commerce**, and **AI/data** platforms—owning architecture, IaC, GitOps, and production operations end-to-end.

- **Platform Architecture & IaC/GitOps:** Designed landing zones, IAM, VPC/networking, and environment separation on **GCP/AWS**; standardized **Terraform/Terragrunt**, **Helm**, and **Argo CD** for consistent, auditable delivery.
- **Reliability Engineering:** Defined **SLIs/SLOs**, instituted on-call, incident runbooks, and post-mortems to protect uptime and performance across distributed systems.
- **Resilience & Autoscaling:** Implemented **KEDA + HPA** event-driven autoscaling, backpressure/queueing (Kafka/RabbitMQ), **graceful degradation**, and **Istio** traffic policies/circuit breaking.
- **CI/CD Modernization:** Upgraded **Jenkins/GitLab** CI pipelines with automated testing, canary/blue-green strategies, and safe rollback to accelerate releases while controlling risk.
- **Observability & Incident Response:** Built unified telemetry with **Prometheus**, **Grafana**, **OpenTelemetry**, **Loki**, **Tempo**, and **ELK/Splunk**; delivered SLO dashboards and actionable alerting.
- **Security & Compliance Guardrails:** Established firewall/VPN, **TLS**, SSH policy, secrets management (sealed-secrets/**KMS**), and audit trails; aligned controls to **SOC 2/ISO 27001** practices.
- **FinOps & Cost Controls:** Drove rightsizing, reservations/savings plans, and egress/storage hygiene to balance performance and budget.
- **Cross-Functional Enablement:** Partnered with product, app, and security teams; mentored engineers; codified standards and **runbooks/playbooks** to raise engineering consistency.
- **Platform Operations:** Operated **GKE** clusters for internal services and AI/analytics workloads; enforced GitOps policies and repository hygiene (Bitbucket administration).

Selected AI & Data Projects

- **Medical Assistant Chatbot (mobile):** Cross-platform app with AI assistant and healthcare IoT integration; API gateway, auth, usage monitoring; inference services on **GKE**.
- **Vision-to-Text:** On-device computer vision with pipelines converting images to structured text for analytics and accessibility.
- **BI/Power BI Pipelines:** Automated data refresh with **GitLab CI**, **Python**, and **PowerShell**; centralized monitoring for data freshness and accuracy.

Core Stack: Terraform/Terragrunt, Kubernetes (**GKE**), **KEDA/HPA**, Helm, **Argo CD**, Jenkins, GitLab CI, Istio, Prometheus, Grafana, OpenTelemetry, Loki, Tempo, ELK/Splunk, AWS, GCP, Bitbucket, Power BI, Python, PowerShell, PostgreSQL/MySQL, VPNs/Firewalls/TLS/SSH.

FPT Software

Jan 2021 - Apr 2025

DevOps Engineer & SRE | AMS Projects for B2C & B2B clients

Cross-functional ownership across DevOps, backend (Java/Node.js), database engineering, and SRE. Delivered stable, secure, and scalable systems for B2C/B2B clients while leading AMS for production services.

- **Platform Architecture & Cloud Migration (Canon):** Led the migration of complex **GCP** estates into a new org structure; redesigned **IAM**, **VPC/networking**, and environment separation; planned change windows and compliance controls to preserve continuity.
- **Reliability Engineering (CanonUSA):** Defined **SLIs/SLOs**, instituted on-call, incident runbooks, and post-mortems; introduced synthetic and real-user monitoring with **Dynatrace/New Relic**, actionable alerting, and weekly reliability reviews—reducing customer-facing downtime and strengthening SLA adherence.
- **Observability & Incident Response:** Built unified telemetry and dashboards; automated detection and escalation; standardized incident workflows to accelerate root-cause analysis and recovery.
- **Release & CI/CD Engineering:** Standardized pipelines with **GitLab CI/Jenkins**; implemented canary/blue-green, policy gates, artifact versioning, and safe rollback for predictable releases across staging/production.
- **Security & Compliance:** Managed **TLS/PKI**, firewall/VPN, access control policies, and secrets management; proactively remediated vulnerabilities and maintained audit readiness.
- **Database Engineering:** Owned **MySQL/PostgreSQL/MongoDB** operations (performance tuning, backup/restore, schema migrations, data patching) across environments.
- **Backend Services — CanonUSA IoT & Subscriptions:** Built and evolved Java/Node.js services for subscription lifecycle, membership, and printer telemetry; optimized APIs for high-traffic paths; collaborated closely with frontend, QA, and product to land secure, scalable features.
- **Stakeholder Leadership:** Bridged product, application, and security teams; facilitated Agile ceremonies; mentored junior engineers; codified standards, runbooks, and best practices to raise engineering consistency.

Core Stack: Java (Spring Boot), Node.js; Docker, Kubernetes (GKE/EKS), Helm, Istio; Terraform; Jenkins/GitLab CI/CircleCI; New Relic, Dynatrace, ELK, Opsgenie, Gremlin; **RabbitMQ**, **Pub/Sub**, **Workflows**, **Vertex AI**; GCP (App Engine/Cloud Functions/GKE) & AWS (EC2/S3/EKS/ELB/WAF/Route 53/CloudFront/Redis); JFrog; Bash/Python; PostgreSQL/MySQL/MongoDB.

PIF Labs

May 2018 - Dec 2020

Embedded Engineer | BKSTEK

End-to-end ownership across embedded firmware, edge gateways, automation workflows, and mobile integration for smart-home solutions in energy efficiency, environmental monitoring, and home security.

- **Systems Architecture & Productization:** Designed device and sensor architecture; implemented low-level firmware and event models; defined MQTT topics/QoS, device identity/provisioning, OTA update/rollback, and remote diagnostics.
- **Edge Orchestration & Automation:** Built Node-RED flows on **Raspberry Pi/SBC** for rules, scheduling, and state management; enabled local-first operation and fail-safe behaviors when offline; integrated with **OpenHAB** and home automation protocols.
- **Security & Privacy Controls:** Applied TLS for telemetry and camera streams, hardened access control, minimized data retention, and enforced user-consent flows for recording and notifications.
- **Mobile Experience & Integration:** Delivered **Flutter** apps for real-time alerts, dashboards, and remote control; streamlined onboarding (pairing/QR), device settings, and firmware update UX.
- **Operational Excellence:** Established CI for firmware/flows, hardware-in-the-loop testing, and release pipelines; instrumented telemetry for field visibility and faster issue resolution.

Selected Projects

- **Energy-Efficient Lighting:** Motion and ambient-light sensing with adaptive brightness and time-based policies; automated schedules to reduce power usage while preserving comfort.
- **Smart Security:** Motion and door/window sensing with push notifications and IP-camera live streaming; improved event detection, verification, and response.
- **Environmental Monitoring & Climate Automation:** Temperature/humidity/air-quality sensing; automated purifiers and thermostats based on sensor signals for healthier indoor conditions.

- **Smart Garden Management:** Soil-moisture sensing and automated irrigation using real-time data and weather inputs; camera-based growth/health checks for plants.

Core Stack: C/C++, Arduino, **Node-RED**, **MQTT**, Raspberry Pi / Single-Board Computers, **OpenHAB**, Mobile (Flutter), camera streaming, OTA updates, mobile notifications.

CERTIFICATIONS

Google Cloud - Professional Cloud Architect Certification	2023 - 2025
Google Cloud - Associate Cloud Engineer Certification	2022 - 2025
HarvardX - Professional Certifications Computer Science for Artificial Intelligence and Computer Science for Web Development	2021 - No expired
Japanese Language Proficiency Test N4	2019 - No expired

HONORS & AWARDS

TopDev Challenge 2020 - Top 1	2020
Bach Khoa University Scholarship in 2nd semester 2017-2018	2017-2018
Bronze Medal at the 22nd April 30th Mathematics Olympiad	2016
Second Prize in the Ninh Thuan Provincial Mathematics Competition, Academic Year 2016–2017	2016-2017

SKILLS

Cloud & Infrastructure	GCP Platform, AWS, Azure, Digital Ocean, Oracle (WebLogic)
CI/CD & DevOps	Jenkins, GitLab CI/CD, GitHub Actions, Circle CI, BitBucket Pipeline, Terraform, Terragrunt, Helm Chart, Ansible, ArgoCD.
Containerization & Orchestration	Kubernetes (K8s), Docker
Monitoring & Observability	New Relic, Dynatrace, Google Cloud Trace, Cloud Watch, ELK Stack, Prometheus, Grafana, Tempo, OpenTelemetry, OpenMetrics.
Networking & Security	Kong API Gateway, ISTIO, DNS, Load Balancers, VPNs, Firewalls, SSL/TLS, SSH, Whitehat
Messaging & Event Streaming	RabbitMQ, Kafka, Mosquito
Programming & Scripting	NodeJS, Python, Java, Powershell, Bash
Mobile & IoT Development	Flutter, OpenHAB, Node-Red, Single Board Computer
System OS	Linux, Window

INTERESTS

Piano, violin, sketching & portrait art, badminton, archery, macro/close-up photography, singing.