

Hoang (Steven) Nguyen

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Experience

Graduate Research Assistant , The University of Texas at San Antonio	Sept 2025 – Present
- Automate health-study outreach for UT Health / CPRIT by building and operating production messaging platform (Docker, FastAPI, Redis Streams, PostgreSQL)—SMS/MMS/RCS and mobile app protocol delivery for multiple concurrent studies. - Improve delivery reliability with OpenTelemetry, Prometheus/Grafana alerts (5xx, stream lag, inbound DLQ), and ops control plane with DLQ replay and worker run-steps. - Give coordinators direct protocol ownership via Next.js admin and ops console—protocol editors, SSE simulation, Redis/DLQ monitoring, NextAuth/Drizzle RBAC. - Extend study reach to non-English participants on iOS/Android by shipping bilingual Flutter mobile app—SSE real-time messaging, FCM push, Participant API.	
Production Engineer , Viettel Group	Jan 2023 – May 2025
- Built and operated Internal Developer Platform (IDP) adopted by 5 enterprise clients, standardizing CI/CD, Terraform IaC, GitOps delivery, and observability—reducing deployment lead time through developer self-service. - Developed Cluster API-integrated Kubernetes lifecycle automation for production clusters with rolling and blue-green upgrades, health checks, and automated rollback controls; reduced upgrade duration 15%. - Built Viettel Cloud observability platform across metrics, logs, and distributed traces with real-time alerting and cross-service correlation; reduced MTTR by 12%. - Engineered queue-driven autoscaling CI/CD runner infrastructure on Kubernetes, improving elastic build capacity and concurrent pipeline throughput for multi-team production delivery. - Designed KMS-backed Secrets Store CSI Driver integration for Kubernetes, replacing static Secrets with dynamic secret injection and automated credential rotation. - Implemented GitOps continuous delivery for Viettel sinvoice processing platform, removing manual release gates and improving deployment frequency by 8%. - Instrumented hybrid-cloud Kubernetes environments for Linux node health, TLS certificate lifecycle, application SLIs, and capacity signals to catch production risks before customer impact. - Participated in production incident triage and on-call support for Kubernetes, CI/CD, and observability platforms, debugging Linux node issues, service connectivity, certificate failures, and capacity bottlenecks.	
Software Engineer Intern , Viettel Group	Aug 2022 – Dec 2022
- Built Python and Go services for real-time video analytics (50,000+ concurrent feeds, 10% lower latency) and contributed to distributed architecture and production deployment for high-concurrency streaming workloads. - Developed Next.js video surveillance platform, improving weekly active users 12% and monthly retention 8% within three months of launch.	

Projects

Kusion – Intent-Driven Platform Orchestrator	github.com/KusionStack/kusion
Contributed to open-source platform orchestration for Internal Developer Platforms using Go, Terraform, and Kubernetes.	
Spektro – Infrastructure RCA Platform	getspektro.com
Building incident triage correlating alerts, CMDB/inventory, logs, and tickets; human-approved postmortem drafting for data center infrastructure ops.	
ODRouter – Operational Decision Routing	
Built decision routing framework with guardrails; 0% false-action on 271-example holdout vs 24% LLM JSON baseline.	

Presentations

Optimizing the Software Development Process with Internal Developer Platform	2024 – 2026
Conf42 DevSecOps 2024, FOSSASIA Summit 2025, SREday Austin 2026	
Kubernetes Upgrade Operator + Cluster API	2023 – 2024
OpenInfra North America 2024, FOSSASIA Summit 2024	

Skills

Programming: Python, Go, Java, C++, SQL, Bash
Systems & Production: Linux/*nix, production debugging, root-cause analysis, on-call, capacity planning, incident response
Networking: TCP/IP, DNS, HTTP/HTTPS, gRPC, load balancing, CDN, service mesh
Infrastructure: Kubernetes, Terraform, GitOps, CI/CD, Docker, AWS, GCP
Datastores: PostgreSQL, MySQL, Redis, schema design
Observability & AI Workflows: OpenTelemetry, Prometheus, Grafana, SLI/SLO, prompt/context engineering, evaluation workflows, responsible AI

Education

The University of Texas at San Antonio , MS in Computer Engineering	Sept 2025 – Present
ECE Pioneering Competitive Scholarship; GPA: 3.91	
Vietnam National University, Hanoi , BEng in Computer Engineering	Oct 2020 – Dec 2024