

SUMMARY

Site Reliability Engineer with 10+ years across cloud infrastructure, observability, and large-scale system operations. Currently advancing expertise through an M.S. in AI & Big Data (NTUT) and an **Executive MBA** (UTA). Combines engineering rigor with data-driven thinking to build reliable, scalable, and cost-efficient systems.

EXPERIENCE

Site Reliability Engineer · Digital Forest Technologies

Sep 2019 – Present

Cost & Infrastructure Optimization

- **K8s Architecture & Compute Optimization:** Engineered a transition from a monolithic EKS deployment to an on-demand "Job-per-game" testing architecture for intensive browser workloads. Mitigated severe K8s node CPU throttling (70% scheduling overhead) and eliminated a 21% timeout rate by deploying dedicated Karpenter NodePools with static CPU policies. Leveraged scale-to-zero automation to slash compute costs by **~90% (saving ~\$3,300 annually)**, while boosting test concurrency by **30x** and reducing full-suite execution time by **95% (from 17 hours to under 50 minutes)**.
- **AI & Storage Cost Reduction:** Achieved **95% reduction** in both AI inference and daily storage costs through LLM architectural redesigns and tiered storage optimization.
- **Observability Cost Savings:** Saved **\$36,000 USD annually** on AWS CloudWatch by replacing redundant Elasticsearch polling with on-demand Grafana plugins, maintaining full visibility for 10 active panels.

Cloud Architecture & CI/CD

- **Cloud Infrastructure & Migration:** Architected production AWS environments (EKS, EC2, S3) and executed seamless on-premise to AWS migrations with zero monitoring gaps.
- **Pipeline & Automation Engineering:** Engineered automated Azure DevOps pipelines for Docker/ECR publishing and zero-downtime EKS deployments, alongside AWX/Ansible automation for infrastructure lifecycle management.
- **Automated Telemetry Provisioning:** Engineered a tag-driven deployment mechanism via AWS SSM and Azure DevOps to migrate EC2 fleets from Elastic to OpenTelemetry agents across 6 AWS accounts. Achieved zero-touch installations and dynamic configuration management.

Observability & Data Integrity

- **External Partner Monitoring:** Built an end-to-end ELK pipeline (Filebeat/Logstash/Kibana) to monitor external studio services. Automated log parsing and anomaly alerting, enabling tier-1 teams to provide proactive technical support and ensure partner SLA compliance.
- **Telemetry Pipeline Resiliency:** Eliminated massive APM data loss (**827K+ drops**) by redesigning OpenTelemetry pipelines with message queuing to buffer ELK I/O bottlenecks. Fortified node stability using K8s taints, tolerations, and topology limits.
- **Time-Series Data Integrity:** Resolved data gaps in Grafana caused by SQL execution lags (>60s). Architected a stateful reference table to track timestamps, ensuring sequential, gap-less data backfills and 100% chronological accuracy.
- **Automated Fleet Provisioning & Monitoring:** Orchestrated a zero-touch OpenTelemetry agent deployment framework using AWS SSM and tag-based associations. Identified and resolved critical gaps in Auto Scaling Group (ASG) lifecycle events and IMDS tag propagation by collaborating with Terraform engineers, guaranteeing seamless, automated monitoring for all dynamically scaled infrastructure.

Performance Tuning

- **Multi-CDN & Latency Optimization:** Resolved cross-border streaming outages by integrating Akamai/CDNetworks. Slashed latency from **400+ms to ~20ms**, reduced packet loss by **90%**, and optimized TTFB to meet strict SLOs (Estonia/Bulgaria/Colombia).
- **High Availability Streaming Architecture:** Engineered an automated cross-region failover mechanism for live video streaming. Designed a resilient routing strategy from Estonia service providers to AWS Frankfurt (primary), with automatic fallback to AWS Stockholm (secondary), guaranteeing zero-downtime service stability.
- **Automated Failover & Database Tuning:** Engineered a dynamic CDN failover system triggered by 10-minute rolling health checks. Concurrently profiled SQL stored procedures to eliminate processing delays and implemented primary/secondary HA failovers for zero-interruption service.

Reliability & Global Resilience

- **Automated CDN Routing & Failover:** Prevented outages by developing a script to monitor multi-CDN network health. Streamlined dynamic DNS switching by syncing optimal routing states to AWS S3, enabling automated, real-time backend node failovers.

- **High Availability & Disaster Recovery:** Maintained production SLA by designing robust backup strategies, rapid incident response playbooks, and automated failover mechanisms to ensure business continuity.
- **Global Operations Leadership:** Acted as sole overseas technical lead (Sep 2021–Apr 2022). Mentored local hires, maintained cross-border IT stability, and delivered a 3-month engineering onboarding program entirely in English.

Stack: Azure OpenAI, Playwright, AWS (EKS, EC2, Lambda, API Gateway, S3), VMC, ELK Stack, Grafana, Ansible/AWX, Octopus Deploy, Git, PowerShell, Bash, Windows/Linux, IIS, MSSQL, Python, PHP, Java

Product Engineer · BIOSTAR MICRO-Technology

May 2017 – Apr 2019

- **Global Fleet Management:** Led the development of a centralized management system to monitor and operate **2,500+ mining rigs** across Japan, China, and Canada, significantly improving global operational uptime and stability.
- **Automation & Hardware Optimization:** Streamlined deployment and maintenance workflows by authoring custom Batch scripts for zero-touch system setup and real-time thermal monitoring. Fine-tuned GPU cooling parameters to maximize hardware longevity and optimize the power-to-performance ratio.
- **End-to-End Client Solutions:** Delivered tailored mining infrastructure solutions for Japanese clients, managing the complete lifecycle from hardware specification and technical definition to final configuration.
- **Cross-Functional & Regional Leadership:** Partnered with R&D and Sales teams to refine product specifications based on market feedback and cost-profit analyses. Provided expert technical oversight for daily operations in China, ensuring strict adherence to performance targets.

System Engineer · EBM Technologies

Aug 2015 – Apr 2017

- **Clinical Infrastructure & Database Operations:** Managed high-availability medical imaging (PACS) infrastructures across Windows Server and MSSQL environments. Orchestrated seamless database migrations, version upgrades, and robust disaster recovery procedures via automated snapshots and offsite backups.
- **Cross-System Integration (POC Leadership):** Spearheaded a strategic PACS Proof-of-Concept, successfully integrating medical device telemetry and live video streams into the Hospital Information System (HIS) to establish an end-to-end clinical data workflow.
- **Incident Response & Hospital IT Reliability:** Delivered dedicated on-site hospital support to guarantee PACS stability and cross-departmental data integrity. Reduced "Time to Clarity" during major outages by translating technical system metrics into service availability reports, prioritizing triage based strictly on clinical and patient impact.

SKILLS

Cloud & OS	Windows, Linux, AWS, VMC, Kubernetes, Docker
Networking & Streaming	F5, Wowza, FFmpeg, HLS, HTTP-FLV
CI/CD & IaC	Ansible, AWX, Octopus, n8n, Terraform, ArgoCD, Git, Azure DevOps, Bitbucket
Scripting	PowerShell, Bash/Shell, Batch, Python, C
Observability	ELK Stack, Grafana, Prometheus, Application Insights, CloudWatch, OpenTelemetry
Databases	MSSQL, MySQL, PostgreSQL, ClickHouse, Supabase
AI & LLM	Claude, Azure AI Foundry
Languages	Mandarin, English

EDUCATION

Executive MBA — The University of Texas at Arlington
2025 – 2027

M.S., AI & Big Data — National Taipei University of Technology
2025 – 2027

B.S., Electronic Engineering — Mingshin University of Science and Technology
2009 – 2013

CERTIFICATIONS

AWS Certified Solutions Architect – Professional

AWS Certified DevOps Engineer – Professional

NTU Information System Training Program — Python (375)

INTERESTS

HYROX (2× finisher) · Scuba diving (120+ dives)

SIDE PROJECTS

天堂 ETF — Lineage of Investment (lineage-etf.site) — Gamified Taiwan ETF planner with live TWSE prices and break-even forecasts.

Home Network Monitor — Anomaly-triggered speed tests with Prometheus/Grafana; cut test traffic ~90%.

Sleep & Health Analytics (github.com) — Apple Health sleep vs. next-day heart-rate analysis with a Streamlit app.

Insta360 Competitor Price Tracker — Course project: scheduled browser-use price scraping with n8n, Elasticsearch, and Grafana.