

Saphal K. Poudyal

saphalpdyl@gmail.com | linkedin.com/in/saphalpdyl | github.com/saphalpdyl | saphal.me

EDUCATION

University of Southern Mississippi

Bachelor of Arts in Computer Science, Minor in Mathematics — GPA : 4.0

Hattiesburg, MS

Aug. 2023 – Expected Dec 2027

EXPERIENCE

Incoming Systems Engineer Intern, Network Observability

Dec 2026

Meter

San Francisco, CA

- Building Cepheus, a distributed network path monitoring system inspired by Cisco ThousandEyes, as a preliminary test-ground project to be transferred to Meter's production observability stack.

Software Engineer, Systems & Infrastructure

Feb 2025 – Present

Institute of Advanced Analytics and Society (Aquaview initiative by NOAA)

Hybrid

- Extracted sandbox provisioning into a standalone Go service with multiple ConnectRPC endpoints, supporting concurrent execution across isolated user and automated pools at scale.
- Designed the core orchestrator as a supervisor actor-model in Go with bounded inbox channels and semaphore-controlled worker goroutines, eliminating shared-state contention across concurrent RPC handlers.
- Built a stale-data reconciliation pipeline to resolve divergence between the external sandbox provider and local registry, handling orphaned and ghost snapshot edge cases with idempotent recovery semantics.
- Instrumented the service with a full observability stack — OpenTelemetry, Grafana, Loki, and Tempo — enabling distributed tracing and structured log correlation across all execution paths.

Founding Engineer

Jun 2025 – Nov 2025

MagnoliaEd LLC

Remote

- Drove end-to-end product development, leading to a \$50,000 seed raise from CoBuilders Cohort powered by Microsoft.
- Provisioned cloud infrastructure on AWS, evaluating managed vs. self-managed cost tradeoffs to cut operational expenses by over 60% at early-stage scale.
- Engineered a modular FastAPI backend with stage-level caching across compute-intensive workflows, reducing redundant processing and improving latency under retries.

Software Engineer Intern, Backend Systems

May 2025 – Aug 2025

Prediction3D Technologies

Part-time / Remote

- Implemented a hybrid OAuth2 authentication system using FedCM with PKCE fallback, integrating Supabase identity provider with a .NET API for cross-browser compatibility.
- Architected a graph-based LLM orchestration system using LangGraph with multi-agent supervisor workflows, RAG, and stateful conversation management via database checkpointing.

PROJECTS

Cepheus | Go, TimescaleDB, NATS JetStream, Phoenix LiveView

Apr 2026 – Present

- Built a distributed network path monitoring platform inspired by Cisco ThousandEyes, performing per-hop latency analysis and route change detection across managed network infrastructure.
- Designed Argus, an anomaly detection engine using EWMA/MDMT-based baselining and a hysteresis state machine to suppress transient noise and alert only on sustained degradations.
- Authored two open-source Go libraries: a scamper network measurement client (likely the first production Go client publicly available) and `cepheusstamp`, a Go implementation of RFC 8762 (STAMP).

Aether | Python, Go, Containerlab, FreeRADIUS

Feb 2026 - Mar 2026

- Simulated a full ISP network from scratch — handling user authentication, IP assignment, and per-user bandwidth control — the same infrastructure real internet providers run.
- Featured on Hacker News front page for ~36 hours (~65 points); directly led to an internship offer from Meter, a \$1.25B network infrastructure company.

deepseek-go | Go

2025

- Co-authored an open-source Go client library for the DeepSeek AI API; accumulated 300+ GitHub stars organically.

TECHNICAL SKILLS

Languages: Go, Python, C/C++, SQL, TypeScript, Elixir

Infrastructure & Tools: AWS, GCP, Docker, Containerlab, Terraform, GitHub Actions, OpenTelemetry, Grafana

Systems & Networking: Linux networking stack, NATS JetStream, ConnectRPC, Temporal, FreeRADIUS

Databases: TimescaleDB, MongoDB, PostgreSQL, Redis