

Pragalva Sapkota

Platform Engineering | Kubernetes | Go | Infrastructure

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EXPERIENCE

R&D Department, DWIT

Infrastructure Initiative Lead

Sep 2026 – Present

Kathmandu, Nepal

- Selected to lead a student-run initiative to give DWIT students and clubs on-demand compute; mentor three junior members through Linux administration, networking, and virtualization.
- Brought up a Proxmox VE host from salvaged lab machines with Tailscale remote access; kept the 4 GB and 2 GB machines on bare Debian after measuring Proxmox's 1.3 GiB idle cost.
- Wrote [five hands-on CI labs](#), from local checks to an isolated self-hosted runner, self-serve for mentees without push access.
- Authored the expansion proposal to the department: on-request VMs for student, club, and faculty projects, a GPU node for CUDA and model training, and a student-operated shared platform.

Linux Foundation Mentorship (LFX), Meshery (CNCF)

Mar 2026 – May 2026

LFX Mentee, Schema and API Governance; Meshery and Layer5 contributor Jan – Jun 2026

Remote

- Built a Go consumer-audit system covering 490+ API operations across three repositories; AST-based Gorilla/mux and Echo route parsers flag missing endpoints and type drift from schema contracts.
- Made meshery/schemas the source of truth by gating model generation, npm releases, and the REST API reference on docs.meshery.io and docs.layer5.io on schema validation.
- Authored 100+ merged pull requests and reviewed 180+ across Meshery and Layer5, including mesheryctl's BATS end-to-end suite reporting to the [QA dashboard](#).
- Coordinated the Go 1.26.4 upgrade across 20+ repositories, sequencing libraries before downstream services.

PROJECTS

devata, bare-metal Kubernetes homelab

Talos Linux, Argo CD, Cilium, MetalLB, Longhorn, Velero, Prometheus, Grafana, Loki

Dec 2025 – Present

[GitHub](#) | [Live status](#)

- Run a Talos Linux cluster on second-hand hardware, reconciled from one public repository by Argo CD (19 Applications, self-heal and pruning); pull requests are gated by strict kubeconform validation.
- Cilium as the eBPF dataplane and kube-proxy replacement, with MetalLB and cert-manager DNS-01 TLS; Grafana and Hubble reach the internet from behind CGNAT through an outbound-only Cloudflare Tunnel.
- Back up off-cluster with Velero to Cloudflare R2 under a capacity-checked budget and verify restores by checksum; NetBird runs as a Talos system extension so remote talosctl access survives a failed control plane.
- Moved the control plane to new hardware and retired a node in place, routing Cilium to the API server through KubePrism; the cluster publishes an hourly public-safe snapshot of itself that renders the live status page.

Edge inference benchmark, Jetson Nano

TensorRT, ONNX, CUDA, NumPy, GStreamer

Sep 2026

[GitHub](#) | [Write-up](#)

- Ran YOLOv8n through TensorRT FP16 and timed every stage: 38.6 FPS for the network, 12.3 FPS live, with the GPU idle two thirds of each frame while the CPU handled video and pre/postprocessing.

TECHNICAL SKILLS

Languages: Go, Python, Bash, C

Platform: Kubernetes, Talos Linux, Proxmox VE, Docker, Argo CD, Helm, Ansible, GitHub Actions

Networking, Storage, Observability: Cilium, MetalLB, Tailscale, NetBird, Velero, Prometheus, Grafana, Loki

WRITING

[How I Access My Bare-Metal Homelab When I Touch Grass](#) (Aug 2026); [How I Made My Homelab Declarative](#) (Jul 2026); [Why Your Pod Is Pending](#) (Jan 2026).

EDUCATION

Tribhuvan University, Deerwalk Institute of Technology

BSc in Computer Science and Information Technology (BSc CSIT)

Expected 2027

Kathmandu, Nepal

LEADERSHIP

DeerHack 2025, Event Lead (Jan – Jul 2025): Led 50+ volunteers for 1,487 applicants; grew reach to 1M+.

DWIT Software Club, Vice President (Jul 2024 – Jul 2025): Ran club programs and the annual hackathon.