

Papop Lekhapanyaporn

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EXPERIENCE

GNS Systems GmbH | HPC System Engineer Jan 2026 — Present

- Part of a team dedicated to evaluating and driving innovations that improve the state and efficiency of the HPC cluster.
- Developing an in-house **Ansible** playbook to replace legacy cluster management software, covering node patching, OS provisioning, license management, and logging.
- Maintaining and fixing the monitoring service stack (**Grafana**, **Prometheus**) for cluster observability.

Redcare Pharmacy | Working student Aug 2023 — Jan 2026

- Built a **Python** monitoring tool that tracked Gematik e-prescription updates and sent automated event notifications, cutting manual tracking effort for the team.
- Wrote **Python** scripts for bulk e-prescription refactoring (type conversions and field edits), accelerating test-case generation.

EDUCATION

RWTH Aachen University | B.Sc Computer Science Oct 2022 — Sep 2025

- **Grade:** 2.0 (German scale, equivalent to B+/Good)
- **Thesis:** Benchmarked automated memory management on **NVIDIA GH200**, characterizing performance trade-offs across diverse memory access patterns.

PROJECTS

Planetary Cluster | Raspberry Pi Slurm Spack Lmod Jul 2026 — Present

- Built a 4-node Raspberry Pi HPC cluster with **Slurm** for job scheduling and **Munge** for authentication, enabling parallel workload submission across nodes.
- Configured **Spack** as a package manager with **Lmod** for environment module management, and set up PXE network boot and Grafana monitoring dashboards.

Rex: Remote Execution Tool | Go SSH May 2026 — Present

- Built a **Go** CLI tool for streamlined remote server management over SSH, eliminating repeated connection overhead via a persistent background daemon (**rexd**) over a Unix socket.
- Implemented named sessions with jump-host support for multi-hop SSH chains, file transfer (upload/download/cross-session copy), and JSON output for scripting integration.

HPC Application | C++ OpenMP MPI Oct 2024 — Jul 2025

- Parallelized sparse matrix-vector multiplication, merge sort, and K-means clustering in **C++** with **OpenMP** across a shared-memory cluster environment.
- Profiled an **MPI** heat conduction simulation with **Vampir** and **Score-P**, diagnosing and resolving load imbalance and communication overhead.

SPACE AC | Software Engineer Oct 2020 — Mar 2022

- **SPOROS** | Arduino C Python Qt5 Nov 2020 — Jul 2021
 - Led full-stack embedded development in **Arduino (C)** for two autorotating payloads and a CanSat relay, plus a **Python/Qt5** ground station with real-time telemetry visualization.
 - Designed the inter-payload communication protocol enabling mid-air telemetry relay; secured **3rd** place at the **Annual CanSat Competition 2021**.

• **Passenger Balloon** | Arduino C Python Oct 2020 — Mar 2022

- Flew **three high-altitude balloon missions** deploying CubeSat payloads to **35 km**, using **Arduino** and **Raspberry Pi** for autonomous imaging and atmospheric sensing.

• **Mentoring** | Oct 2021 — Mar 2022

- Designed and ran a structured onboarding program covering programming fundamentals, project workflow, and the team's hardware/software stack.

EXTRACURRICULAR ACTIVITIES

Interact Club | President, District Vice President

May 2020 — Mar 2022

- Led a **Rotary International**-supported student club; organized annual events and drove cross-club community service initiatives.

TECHNICAL SKILLS

Language: Python, C/C++, Go, Java, Haskell, SQL, PostgreSQL, Bash

Framework: CMake, CUDA, OpenMP, MPI, Pytorch, Ansible

Tools: Git, Github/Gitlab, Grafana, Prometheus, Linux, Slurm, InfiniBand

LANGUAGE

Thai: Native	English: C2	German: C1
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