Papop Lekhapanyaporn

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Experience

Redcare Pharmacy | Working student — Aug 2023 - Present

- Developed an automation tool using **Python** to monitor and report frequent updates from Gematik regarding e-prescriptions, and to send notifications for key events, keeping the team informed and reducing manual effort.
- Set up a local testing environment using **Wiremock**, **Java**, and **Python** to validate E-prescriptions, and designed a tool to convert example templates into mock files for automated testing, reducing manual effort, enabling early compliance checks, and improving the overall testing workflow.
- Developed **Python** tools for data refactoring and bulk editing of E-prescriptions, including type conversion and field modifications, streamlining test case generation and accelerating development process.

Education

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

- **Thesis**: Benchmarked automated memory management techniques on **NVIDIA GH200**, revealing performance trade-offs under diverse memory patterns.

Projects

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

- Collaborated in a team of three to parallelize serial implementation of sparse matrix-vector multiplication, merge sort, and K-means clustering using **C++** and **OpenMP** to leverage a cluster environment.
- Validated correctness of an **MPI**-based heat conduction simulation and used profiling tools (**Vampir**, **Score-P**) to analyze performance bottlenecks, addressing load imbalance and communication overhead.

Asclepius, ASL translator | Python OpenCV Tensorflow — Mar 2022 - Jun 2022

- Led a team of five in developing a machine learning–based translator for American Sign Language (ASL) to text, using real-time video processing and gesture recognition. **1st Place** winner at the **Microsoft APAC AI for Accessibility Hackathon 2022**.
- Oversaw project planning, team coordination, and the design and training of the core deep learning model using **TensorFlow** and **OpenCV**.

SPACE AC | Software Engineer — Oct 2020 - Mar 2022

- **SPOROS** | Arduino C Python Qt5 — Nov 2020 — Jul 2021
  - Led end-to-end software development using **Arduino (C)** for two autorotating payloads and a CanSat relay system, and **Python/Qt5** for the ground station with real-time data visualization.
  - Designed custom communication protocols enabling mid-air telemetry relay; secured **3rd place** in the **Annual CanSat Competition 2021**.
- **Passenger Balloon** | Arduino C Python — Oct 2020 — Mar 2022
  - Contributed to **three high-altitude balloon missions**, each deploying a CubeSat payload using **Arduino (C)** and **Raspberry Pi (Python)** for autonomous image capture for atmospheric sensing and aerial imaging, reaching altitudes up to 35 km.
- **Mentoring** | Arduino C Python — Oct 2021 — Mar 2022
  - Designed and delivered a structured training program for new team members, covering programming fundamentals, project workflow, and hands-on development with the team's tech stack.

Extracurricular activities

Interact Club | **President, District Vice President** — May 2020 - Mar 2022

- Led a student-run volunteer club supported by **Rotary International**; organized annual events and initiated collaborative community service projects with partner clubs.

Technical Skills

Language: Python, C/C++, Java, Typescript/Javascript, HTML, CSS/SCSS, Haskell, SQL, PostgreSQL,Sass

Framework: CMake, CUDA, OpenMP, MPI, Pytorch, React, Next.js, Node.js, Prisma.js

Tools: Git, Github/Gitlab

Language

Thai: Native **English**: C2 **German**: C1