Papop Lekhapanyaporn

https://papop.dev

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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

SPOS — Embedded OS on ATmega664 | C AVR — Apr 2024 — Jul 2024

- Built a custom OS on the **ATmega664** using **C** and **AVR-GCC**, featuring interrupt handling, critical sections, task scheduling, and dynamic memory management across internal SRAM and external **23LC1024** RAM.
- Developed user-facing features including LED matrix output, joystick input, and a real-time **Snake game** to showcase OS functionality.

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 over **XBee 3 (Zigbee 3.0)**, enabling mid-air telemetry relay between payloads, CanSat, and ground station.
  - Secured **3rd place** in the **Annual CanSat Competition 2021**.
- **AlienSat** | Arduino C Python Qt5 — Aug 2021 — Feb 2022
  - Developed software for a CanSat payload equipped with a **thermal camera** to stream raw temperature arrays in real-time for environmental analysis of PM2.5–heat correlation.
  - Implemented live telemetry and thermal data visualization in the **Python/Qt5**-based ground station; handled direct payload-to-ground communication protocol design.
- **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++, SQL

Framework: CMake, AVR, Arduino, CUDA, OpenMP, MPI,

Tools: Git, Github/Gitlab, RaspberryPI, XCTU(Zigbee)

Language

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