PHANU SAWET

Full-Stack & On-Device AI Engineer

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Chiang Mai University (CAMT MMIT) undergraduate (Major GPA 3.56), Head Teaching Assistant for AIoT at CMU School of Lifelong Education, and multi-term Programming & Rapid Application TA. I build reliable full-stack applications and privacy-preserving, on-device AI systems — from deterministic local-LLM safety architectures and zero-cloud CNN/YOLOv8 inference to 358-test TypeScript backends and native macOS tools.

EDUCATION

Chiang Mai University — College of Arts, Media and Technology (CAMT) 2024 – 2028 (Expected)

B.Sc. in Modern Management and Information Technology (MMIT) · Available for 10-Month Internship (Jun 2027 – Mar 2028) **Major GPA 3.56 · Cumulative GPA 3.42**

EXPERIENCE

Head Teaching Assistant (Gen 1) & Teaching Assistant (Gen 2–3) — AIoT Event · CMU School of Lifelong Education Sep 2026 – Present

- Led the 1st Generation AIoT cohort as **Head Teaching Assistant** (Sep 2026) and continued teaching the 2nd and 3rd Generation cohorts (Oct 2026 – Present) on-site at CMU School of Lifelong Education.
- Facilitated hands-on AIoT and edge computer-vision labs covering Python, **YOLOv8** object detection, environment provisioning, and live troubleshooting.

Teaching Assistant — Rapid Application, Advanced & Fundamental Programming · Chiang Mai University Jun 2025 – Aug 2026

- **Rapid Application (May – Aug 2026 · Remote):** Supported remote lab cohorts across a 4-month contract, mentoring students on rapid full-stack prototyping, debugging, and end-to-end app delivery.
- **Fundamental (Jun – Nov 2025) & Advanced Computer Programming (Nov 2025 – Mar 2026 · On-site):** Lab TA for ~32 students per section, debugging live code, tracing algorithmic logic, and coaching first-time programmers 1-on-1.

Full Stack Engineer (Freelance) · Baan Bai Mai Music House and Dance Co., Ltd. Nov 2024 – Feb 2025

- Built an internal scheduling and attendance platform (**React** frontend over an **Express REST API**) tracking student schedules, instructor assignments, and per-subject session counts, alongside a production **LINE LIFF** mini-app and companion admin panel.

Photographer & Video Editor (Part-time) · M&M Studio Jan 2023 – Present

- 3+ years delivering client photography and video post-production on tight turnarounds alongside university coursework and teaching contracts.

SELECTED ENGINEERING PROJECTS

KhaiDee v2 — Two-Sided QR POS & Live Vendor Queue TypeScript · Node.js · Monorepo · 358 Tests

- Architected a two-sided ordering platform (customer QR ordering + live vendor queue) separating pure business invariants in **packages/domain (172 unit tests)** from HTTP/persistence in **apps/api (186 integration tests)**.

Jaidee — Privacy-Preserving Mental-Health Screening Python · Electron / React · Ollama

- Built a **100% on-device local-LLM** companion running PHQ-9/GAD-7 screening with zero cloud egress and a **deterministic safety boundary** isolating conversation (Ollama) from rule-based self-harm scanning, validated scoring, and crisis hotline 1323 routing.

SignBridge — Offline ASL Fingerspelling Translator Python · Keras (CNN) · MediaPipe · Pure JS

- Trained a compact CNN on Sign Language MNIST to **94.8% held-out test accuracy**, then exported weight tensors to a **pure-JavaScript forward pass** in the browser for real-time webcam inference with zero network calls.

Cockpit — Cross-Platform Personal OS & AI Study Engine SwiftUI · Next.js 16 · MCP · Gemini / Whisper

- Built a native Apple Silicon **macOS SwiftUI app (~8.2K LOC)** paired with a **Next.js 16 Mobile PWA** synced via Private GitHub Gist and Obsidian Vault, featuring an automated Canvas LMS 3-step .xlsx verifier and a Gemini Flash / Whisper.cpp lecture audio digest pipeline.

Farmhouse (Truck-Loading Optimizer) · Anya (Medicine Reader) · CAMT Grade API React · Leaflet · Gemini Vision · Raw PostgreSQL

- **Farmhouse:** Best-Fit-Decreasing bin packing with lat/long proximity across **40 distribution centers**. **Anya:** Keyboard/audio-only Thai Vision OCR + TTS for blind users. **Grade API:** Express + raw pg PostgreSQL REST API covered by node --test and supertest.

TECHNICAL SKILLS

Languages	TypeScript, Python, JavaScript, Swift, SQL, PHP, HTML/CSS
Web & Backend	React, Next.js 16, Vite, Node.js, Express, REST APIs, PostgreSQL (raw pg), MySQL, Laravel, LINE LIFF
AI & Data	YOLOv8, Keras (CNN), MediaPipe, Local LLMs (Ollama, Qwen), Gemini Vision/Audio API, Whisper.cpp, Hugging Face
Systems & Tools	SwiftUI, Electron, Docker, Git & GitHub, MCP, Leaflet, node --test, Supertest
Spoken	Thai (Native), English, Korean