

Napat Naowarangsee

Date of birth: Jul 2, 2001

Nationality: Thai

GitHub: github.com/jjnnaappaatt

CONTACT

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LANGUAGES

English: Intermediate. TOEIC-770

Thai: Native

SKILLS

- **Programming & Development**
  Python (scientific computing, AI)
  C++ (Intermediate)
- **AI & Computer Vision**
  TensorFlow, PyTorch, OpenCV, Open3D, Scikit-learn
- **Agentic AI & Harness**
  Claude Code, Codex CLI, MCP
  Harness: skills, subagents, hooks, context engineering
- **LiDAR & 3D Sensing**
  Point cloud processing, spatial feature extraction, 3D analysis
- **Data Analysis**
  NumPy, Pandas, Matplotlib
- **Embedded Systems**
  Sensor interfacing and edge AI deployment (Arduino, Raspberry Pi)
- **Research Tools**
  Intel RealSense SDK, Microsoft Office Suite, R Studio

PROFESSIONAL PROFILE

LiDAR and AI researcher for patient monitoring who also builds the software around the research. Sole developer of two full-stack health platforms; designs agent workflows and context in Claude Code.

EDUCATION

- **MASTER'S DEGREE IN FRONTIER ENGINEERING (HUMAN-MACHINE SYMBIOTIC SYSTEMS PROGRAM)**
  - Currently studying | Kanazawa University | OCT 2024 – Present
- **MASTER'S DEGREE IN BIOMEDICAL ENGINEERING**
  - Currently studying | King Mongkut's University of Technology Thonburi | JUL 2023 – Present
- **BACHELOR'S DEGREE IN MECHANICAL ENGINEERING**
  - GPA: 2.78 | King Mongkut's University of Technology Thonburi | JUL 2019 – JUL 2023

RESEARCH EXPERIENCE

MASTER'S THESIS — KMUTT (ONGOING)

LiDAR-based Posture Monitoring Using AI

- Real-time point cloud analysis and deep learning for non-invasive patient posture assessment, running on a Raspberry Pi 5 at 15.6 ms per frame with caregiver alerts

MASTER'S THESIS — KANAZAWA UNIVERSITY (ONGOING)

Non-Invasive Skin Property Estimation Via Air-Jet and LiDAR

- Biomechanical sensing using optical deformation analysis for medical diagnostics. Young's modulus error under 10%.

Bachelor's Thesis — KMUTT

Virtual Evaluation System for Retrievable Stent Performance

- Simulation-based analysis of device–vessel mechanical interaction in thrombectomy.

PUBLICATIONS

- N. Naowarangsee, S. Boonprong, A. Khantachawana, **"Edge-Embedded LiDAR Point-Cloud Posture Classification toward Pressure Ulcer Prevention in Bedridden Patients,"** BMEiCON 2026, Fukuoka, Japan (accepted, oral talk).

ENGINEERING TOOLKIT

- **Full-stack & Cloud**
  TypeScript, Next.js, Node.js, FastAPI, Supabase, Vercel

AGENTIC AI PRACTICE

- **Sandbox pre-deploy, CI & CD**
  Test in a sandbox before deploy; CI tests and releases
- **Skills and hooks**
  jjstack: my own Claude Code plugin of skills with Python checkers, tested hooks and rules
- **Daily use**
  About 1,000 Claude Code sessions since May 2026

INTERESTS

- **Strength training**
  Trains regularly; built a workout app with a muscle volume map
- **Movement biomechanics**
  How muscles, joints and fascia move the body in squat, bench and deadlift

LIVE DEMOS

- **Workout tracker**
  pookie-gym.vercel.app
- **Nutrition planner**
  mealband.vercel.app
- **Lab PC booking**
  lab-pc-booking.vercel.app
- **ClaudePet (macOS)**
  github.com/jjnnaappaatt/ClaudePet

ENGINEERING PROJECTS

- **CLICS: AI CLINICAL REASONING PLATFORM**
  Next.js, Supabase, Claude API | JUN 2026 – Present
  - Sole developer. Scores physicians' clinical reasoning from their AI conversations for a licensing body's CME pilot.
  - Strips personal data before any Claude call; handled 100 concurrent users with 0 errors in load tests.
- **ACTIVE AGEING INDEX PLATFORM**
  Next.js, Supabase, FastAPI, LINE API | JUN 2026 – Present
  - Sole developer of a national elderly-screening platform in production; field staff use it through LINE.
  - Combines 24 clinical scoring tools into one ageing index; hides small groups from dashboards (k-anonymity).
- **CLAUDEPET (OPEN SOURCE)**
  Swift, SwiftUI | JUN 2026 – Present
  - macOS app that shows Claude Code usage and rate limits from local logs, with no network access.
  - Public on GitHub, with CI tests and releases up to v0.14.0.
- **WEB APPLICATIONS**
  Next.js, Supabase, Vercel | MAY 2026 – SEP 2026
  - Association website with inline CMS editing; lab PC booking with approval rules enforced in Postgres.
  - Two PWAs: a workout tracker and a nutrition planner that keeps data on the device.

AWARDS & HONORS

- **Silver Medal, iENA 2025,** Nuremberg, Germany: edge LiDAR system for pressure ulcer prevention (Nov 2025)
- **Prominent Invention Special Award,** Taiwan Prominent Inventor League, same invention, iENA 2025 (Nov 2025)
- **Bronze Medal, Taiwan Innotech Expo 2023,** Taipei: mock circulation device for testing stent retrievers (Oct 2023)
- **Gold Medal, NRCT Higher Education Innovation Contest 2023,** Thailand: stent retriever test rig (Aug 2023)
- **Outstanding Award, NRCT Innovation Project Proposal 2023,** same project (Aug 2023)

ACADEMIC REFERENCES

Assoc. Prof. Dr. Anak Khantachawana
Thesis Advisor — Master's Program in Biomedical Engineering
Department of Mechanical Engineering
King Mongkut's University of Technology Thonburi (KMUTT)

Prof. Dr. TANAKA Shigeo
Thesis Advisor — Frontier Engineering Program
Institute of Science and Engineering
Kanazawa University, Japan