

THANAKRIT WONGKHA

ROBOTICS & AUTOMATION ENGINEER

+66 95 756 6669 | thanakritwongkha@gmail.com | github.com/fordft | Chonburi, Thailand

ROS2 | AUTONOMOUS MOBILE ROBOTS | COMPUTER VISION | VLA | PLC

PROFESSIONAL SUMMARY

Robotics and Automation Engineering graduate with hands-on experience in industrial AMR development, ROS2/OpenRMF fleet systems, VLA/computer vision, web/mobile products, and agentic software development using Codex, Claude Code, and open-source AI harnesses. During a four-month internship at Pro En Innovation, owned the electrical wiring, robot-control software, and web interface for a differential-drive AMR designed for payloads up to 200 kg, and independently built an internal PR/PO workflow application.

EDUCATION

Kasetsart University, Sriracha Campus

2022 - 2026

B.Eng. in Robotics and Automation Systems Engineering (International) | GPA: 2.87/4.00 | Graduated 2026

PROFESSIONAL EXPERIENCE

Robotics & Automation Intern | Pro En Innovation Co., Ltd.

Completed Jan 2026

Four-month internship | Industrial AMR R&D, Fleet Management & Internal Software

- Owned the electrical and software implementation of a differential-drive R&D AMR designed for payloads up to 200 kg, completing all wiring, robot-control programming, and a web-based control interface.
- Developed a ROS2/OpenRMF AMR simulation and fleet-management architecture for coordinated robot workflows and software-hardware integration.
- Independently developed ProEn ERP, a web application that digitized PR/PO tracking and centralized status visibility for internal workflows.

Founder & Product Developer | QAG

Pre-launch

Independent web product | qagcard.com

- Independently developing QAG end to end, including product planning, UX/UI, web implementation, testing, domain setup, and deployment.

Freelance Developer | Sangaroon Auto Car

Project-based

Web UI & Mobile Application | Two-person team | sangaroonautocar.com

- Co-developed customer-facing web UI and a companion mobile application for a commercial used-car marketplace in collaboration with another developer.
- Contributed responsive, bilingual vehicle-discovery flows covering search/filtering, inventory browsing, branch discovery, and content interfaces.

SELECTED PROJECTS

MARS - Mobile Autonomous Reception and Guidance System

2024 - 2026

Original Prototype Software & Electrical Lead | Final-Year Project Contributor / Technical Advisor

- Implemented the complete software stack and all electrical wiring for the original Year 3 prototype; teammates handled mechanical design and assembly.
- Architected ROS2 Nav2 navigation and LiDAR/IMU/RealSense integration; later contributed AI work and served as technical advisor for the Year 4 extension credited in the final report.

Vision-Language-Action Robotic Arm with Scene Graph Representation

2026

AI/VLA Research & Solution Lead | Final-Year Project Member

- Led model research and solution architecture for a language-conditioned robotic arm, evaluating VLM/VLA options and defining the training strategy.
- Sourced, configured, and trained candidate models with Python, PyTorch, Hugging Face LeRobot, and SmolVLA; translated findings into the team implementation plan.

Auto-Rickshaw Detection Benchmarking on the India Driving Dataset (IDD)

2025 - 2026

Exploratory Computer Vision Research

- Prepared IDD data and trained YOLOv8, YOLOv10, YOLO11, and YOLO26 models; compared validation accuracy, training speed, and compute use to evaluate accuracy-efficiency trade-offs.

SELECTED AWARDS & COMPETITIONS

WorldSkills Thailand, PLC Skill - National 3rd Runner-up.

- Winner (1st Place), 6th International Convention on Vocational Students' Innovation Projects (2021); Bronze Medal, MCOT-ABU National Vocational Robotics Competition (2021).
- Semifinalist, Thailand Open Robotic Competition @Home Education (2024); Participant, IDC Robocon International and Robo Innovator Challenge (2023).

TECHNICAL SKILLS

Robotics & Automation: ROS2, Nav2, OpenRMF, differential-drive & holonomic AMRs, fleet management, web-based robot control, PLC, LiDAR/RPLIDAR, IMU, Intel RealSense, electrical wiring

AI & Vision: Python, PyTorch, OpenCV, Ultralytics YOLO (v8, v10, YOLO11, YOLO26), VLM/VLA, Hugging Face LeRobot, SmolVLA

Embedded & Tools: C/C++, Arduino, ESP32, Jetson Nano, Linux, SolidWorks, FluidSIM

Product & Software: Web UI/UX, mobile application development, workflow systems, Dart/Flutter, Firebase, Git/GitHub

Agentic Development: OpenAI Codex CLI, Claude Code, Pi Coding Agent, Hermes Agent, OpenClaw, open-source/forked AI harnesses, MCP and tool integration, prompt/context engineering, multi-agent workflows

Languages: Thai (Native), English (Working Proficiency)