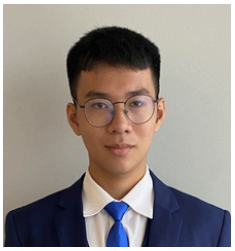

PATTARADANAI AKKHARAT

Project Manager | Data Scientist | System Analyst

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INTRODUCTION

First-year Computer Engineering student with a dual focus on AI/ML Development and Technical Project Management. Proven track record of co-founding a healthtech startup and leading cross-functional teams to deliver award-winning AI solutions. Skilled in bridging the gap between complex technical requirements and business objectives using Agile frameworks. Experienced in full-stack development, model deployment, and optimizing workflows for scalability. Committed to driving innovation through data-driven decision-making and efficient resource management.

SOFT SKILLS

- **Agile & Scrum Methodologies**
- **Strategic Planning & Risk Management**
- **Cross-Functional Team Leadership**
- **Stakeholder Management**
- **Technical Documentation**
- **Public Speaking & Pitching**
- **Management Tools:** Trello, Notion, Sequential , Google Workspace (Advanced)

HARD SKILLS

- **Data Science:** scikit-learn, pandas, numpy
- **Data Visualization:** Power BI, Plotly, Matplotlib
- **Machine Learning/Deep Learning:** pytorch, pytorch-lightning, huggingface,timm, Transformers, unsloth, LLM Integration (RAG)
- **Optimization:** Cuda, Parallel processing, Quantization
- **Full-stack Development:** vite,vue.js,node.js,fast API, Bootstrap, Mongodb
- **DevOps & CI/CD:** Vercel, git, github
- **Cloud**: AWS, GCP, Vast AI

WORK EXPERIENCES

Program Management Unit for Competitiveness (PMUC - Thailand Government) Oct 2025 - Present
Project Manager&Tech Lead (Part-time)

- Spearheaded and managed a cross-functional team (AI Engineer, Frontend/Backend Developers, DevOps) to design and implement an AI pre-screening solution for applicant proposals.
- Significantly reduced the workload for PMUC staff by automating the initial document review process
- Drove team productivity and project delivery by implementing a Notion-based collaborative workflow and applying Agile frameworks

School of Engineering and Technology, Walailak University Jul 2025- Sep 2025
AI Researcher & MLOps & Research Manager (Full time)

- Engineered WattGraphNet, an Attention-Based Spatial-Temporal Graph Convolutional Network model that achieved a 40%+ improvement in cost savings by reducing the load forecasting error (SB-WAPE) to 17.93%, significantly outperforming the next best model (20.95%).
- Developed and deployed an ultra-lightweight, high-efficiency solution capable of running a one-week-ahead load prediction in just 0.05 seconds on a low-cost, under-$50 CPU, demonstrating expertise in MLOps and resource-efficient model optimization.
- Contributed to the creation of the Adaptive Adjacency Matrix (AAM) architecture, enhancing model explainability and providing actionable insights that can potentially save Thai national utilities up to 8 million THB annually in electricity costs for a single project (from 20M B/y to 12M B/y).

UPHASIA ARTIFICIAL INTELLIGENCE CO., LTD. 2023 - Jan 2025
Project Manager & AI Engineer (Full time)

- Led the design and development of the "Uphasia Workflow," integrating SCB10x Typhoon 1.5x with advanced ASR architecture in Python.
- Engineered the "Uphasia Scoring Algorithm" to compute AQ scores from patient results using the WAB-R Test, leveraging cloud deployment on PythonAnywhere.
- Integrated large language models (LLMs) with prompt-based techniques (COT and Few-Shot Learning) to automate patient exercise generation.

AI Builders 5 - Mahidol University April 2025 - June 2025
Teaching Assistance (Part-time)

- Taught and guided 4 students through real-world AI projects, including image classification for cassava disease and stool-based diagnosis, LLM-based scheduling (Qwen3), and Parkinson's detection using signal-to-image techniques.

The Promotion of Academic Olympiad and Development of Science Education Foundation (POSN) - KMUTNB Sep 2024 - Oct 2025
Teaching Assistance (1st Camp): Jr.Teaching Assistance & Sr.Teaching Assistance (Part-time)

- Taught 30 students the fundamentals of C++ programming for example compiler usage, syntax rules, loops, and recursion.
- Assisted in hands-on coding sessions to reinforce programming logic and problem-solving skills.
- Supported students' preparation for academic Olympiads in computer science.

Watwanglen school Aug 2024 - NOV 2024
Web Developer (Part-time)

- Developed a dynamic school website, embedding HTML, CSS, and JavaScript, utilizing Google Drive API for real-time student data visualization.
- Synchronized the school's event calendar with the website, improving communication and event tracking.

Saraburiwitthayakhom school Aug 2024 - Sep 2024
Teaching Assistance (Part-time)

- Assisted students in preparing for national computer project and web application competitions.
- Provided guidance on software development, algorithmic problem solving, and project presentation.

Frontend Developer & Algorithm Specialist Jan 2024 - Feb 2024

- Designed and deployed the SBW Promnight 2024 event website, streamlining participant ticket status checks with Figma, HTML, CSS, and Google App Script.
- Optimized the backend search algorithm from time complexity O(N) to O(1), resulting in a significant performance boost.

EDUCATION

Computer Engineering & Digital Technology (CEDT) 2025 - Present
Chulalongkorn University

SuperAI Engineer Season 5: Engineer Track (Bronze Medal & Outstanding Poster) Dec 2024 - Oct 2025
Artificial Intelligence Association of Thailand (AIAT)

AI Builders 3 (Outstanding AI Award of Season 3) April 2023 - June 2023
Mahidol University

Science Math Technology and Environment (SMTE) 2022 - 2025
Saraburiwitthayakhom School

SuperAI Engineer SS5 : Bronze Medal & Outstanding Poster Award

I'm the **Project Manager/Technical Leader** of the Pangpuriye Hackathon Team **(Lead and Manage on 23 peoples in Team)**, holding the role of SuperAI Engineer Level 2. Throughout my journey with the team, I've regularly stepped up to guide our projects, serving as Project Manager three times in seven hackathons and as Technical Lead once. My consistent presence as an AI Engineer has allowed me to deeply contribute to our technological innovations, while I've also been responsible for orchestrating our presentations at every event, ensuring our team's ideas are effectively communicated and showcased.

Date
5 - 9 MAY 2025
Company/Org
AIAT, CP Axtra

Hackathon: SALE FORECASTING & OPTIMIZED PRODUCT ASSORTMENT HACKATHON
Result : 2nd Place
Responsibilities:
- Led data preparation and exploratory analysis for the sales forecasting task
- Engineered and selected key features to enhance model performance
- Collaborated with the forecasting team to design and refine the prediction pipeline
- Managed and crafted the final presentation slide deck for effective delivery

Date
12 - 16 MAY 2025
Company/org
AIAT, Business Online PCL

Hackathon: CRIME CHARGES ANALYSIS HACKATHON
Result : Winner
Responsibilities:
- Designed a hybrid modeling approach combining traditional methods with lightweight language models—achieving LLM-level accuracy with significantly faster inference
- Deployed the final model using ONNX Runtime on a Linux VM, achieving 0.014-second latency and 70 requests/second throughput on CPU
- Developed a scalable FastAPI backend tailored for integration into judicial systems, optimized for real-time, low-latency performance
- Oversaw the end-to-end deployment pipeline, from modeling to production-level readiness

Date
19 - 23 MAY 2025
Company/org
AIAT, AXONS Corporate

Hackathon: DEMAND FORECASTING HACKATHON
Result : Winner
Responsibilities:
- Served as Project Manager and Modeling Lead, driving the team to first place
- Led the modeling team to the top of the leaderboard using Chronos-based architectures for high-accuracy demand forecasting
- Delivered key insights that informed both model strategy and final presentation, directly contributing to the winning outcome

Date
2 - 6 JUNE 2025
Company/org
AIAT, Chulalongkorn University

Hackathon: LIVER FIBROSIS SEVERITY PREDICTION HACKATHON
Result : Winner
Responsibilities:
- Led model development by designing a hybrid pipeline combining a pretrained ResNet image encoder with a LightGBM tabular classifier, achieving top performance
- Initiated and implemented image augmentation strategies to enhance model precision on liver ultrasound images
- Developed visualization techniques to highlight model attention, demonstrating that the model accurately focused on relevant liver regions

CERTIFICATE & AWARDS

SIRIRAJ HOSPITAL: SIRIRAJ HACKTHON 2023
- 3rd Place (10,000 THB + 3,000 USD Cloud Credits)

SCB 10x: TYPHOON HACKATHON
- Top 4 Finalists

KX-KNOWLEDGE X CHANGE: Techbite 5.0
- Techbite 5.0 Incubation Fund 650,000 THB

MHESRI: TEDFUND
- Idealtion Fund 100,000 THB

THE ASSOCIATION OF THAI ICT INDUSTRY: Thailand ICT Award 2024
- Finalist in Artificial intelligence technology of the year
- Finalist in Research&Development Project of the year
- Finalist in Inclusion&community service

THAIVIVAT: Thaivivat Innovation Award #2
- Honorable Mention

THAIVIVAT: Thaivivat Innovation Camp 2025
- Honorable Mention

FIRST: First Tech Challenge Thailand 2022-2023
- Participated in Robotic Competition

AIESEC: Social Case Competition 2023
- Finalist

Rehack Search 2024
- Finalist

VISTEC/VISAI: AI BUILDERS SEASON 3
- Outstanding Artificial Intelligence Project Award

POSN: Computer Olympic
- Passed 1st and 2nd camp

GISTDA: School satellite competition 2024
- Winner

DTI: Thailand Cansat-Rocket Competition 2023-2024
- Special cansat award&Rocket consolation award

OBEC: SMTE Computer Project Competition 2024
- Winner

KMUTT: Mental Health Hackathon 2024
  - 1st Runner-Up

OBEC: Competitive Programming on Arts and Crafts No.70
- Gold Medal in naitonal round

blooming juniper foundation:The 2nd Siam Robot Programming Tournament
- Participated in Robotic Competition

Capital Market Datathon
- finalist in round 1

SPU: SPU AI PROMPT MINI HACKATHON 2024
- Participated

CU: Halal Scientists Competition & Health Care Innovation 2023
- Finalist

PROJECT

Ear Cancer Classification using RESNET and Attention Map with Vision Transformers (with Deployment)
- GitHub: Ear Cancer Classification Project
- Detail: Developed a deep learning model for ear cancer detection, combining ResNet for feature extraction and Vision Transformers (ViT) with attention maps to enhance image segmentation accuracy. The model was trained and tested using custom datasets, and deployed using a web-based interface for medical use.
- Tools used: ResNet, Vision Transformers (ViT), TensorFlow, Keras, PyTorch, Flask for deployment, Docker for containerization.

TEEOR (The First Procurement Books Checker Tool of Thailand)
- Medium: TEEOR Tool Article
- Detail: Created Thailand's first Web application using DeepLearning for verifying procurement records, automating the checking process against predefined standards. It streamlined government procurement, reducing errors and enhancing transparency.
- Tools used: Python, Pandas, OCR libraries for text extraction, Streamlit for web interface

3D Reconstruction for Brain Stroke Segmentation from Multilayer CT-Scan Images
- GitHub: BrainStroke Segmentation
- Detail: Developed an advanced segmentation tool that reconstructs 3D images of brain strokes from CT scans, enabling accurate visualization and diagnosis. This project included preprocessing CT data, segmentation using UNet, and 3D rendering.
- Tools used: Python, Keras, UNet, 3D Slicer for visualization, TensorFlow.

Cansat Flight Software, Deployment System, Submission Software (UNet) for System Integration of Cansat-Rocket
- GitHub: Cansat 2024 Project
- Detail: Developed integrated software for Cansat missions, including flight control, data acquisition, and a deployment system. The software was built to handle real-time data during rocket missions and was integrated with the UNet model for image-based analysis.
- Tools used: Python, C++, UNet, Arduino for hardware control., PlatformIO extension

Traffic Simulation System Web Application
- GitHub: Traffic Simulation Project
- Detail: Created a web-based traffic simulation system, with real-time traffic flow analysis using different algorithms. The application featured both Vue.js for the frontend and Streamlit for fast prototyping and visualization.
- Tools used: Vue.js, Streamlit, Python, Plotly for data visualization.