

PANNAWIT KRUTNAK

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Profile

Innovative Software Engineer specializing in mobile and web development, AI/ML research, and scalable system design. Skilled in Flutter, Next.js, Python, and TensorFlow, with award-winning projects in national competitions and hackathons. Passionate about building solutions that solve real-world problems.

Skills

- **Programming:** C, C++, Python, Go, TypeScript, Dart, JavaScript
 - **Web & Mobile:** Flutter, Next.js, React, Node.js, Express.js
 - **AI/ML & Data:** TensorFlow, PyTorch, Scikit-learn, Pandas, NumPy
 - **Database & DevOps:** MySQL, PostgreSQL, MongoDB, Redis, Docker, Git, Linux
 - **Methodologies:** Agile/Scrum, Clean Architecture, UML Modeling, Software Design Patterns, Testing
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Experience

MUICT DEV-CLUB — Mobile Frontend Developer *Faculty of ICT, Mahidol University* | Sep 2024 – Present - Developed and deployed mobile applications in Flutter using Clean Architecture, enhancing maintainability and scalability for faculty projects.

- Created an engaging event promotion website for the MUICT Open House, increasing participant registration and visibility.
- Collaborated in Agile/Scrum teams to deliver projects **on time**, improving team efficiency and iterative development processes.

Biomedical Informatics Research Lab — Junior Research Assistant *Faculty of ICT, Mahidol University* | Aug 2024 – Present - Designed and implemented a web platform to deploy AI solutions, providing researchers with an intuitive and interactive interface.

- Processed and cleaned large biomedical datasets, training machine learning models that achieved **high accuracy and reliability** in predictions.
 - Developed and optimized end-to-end AI pipelines using TensorFlow and PyTorch, ensuring **scalable and reproducible research workflows**.
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Projects & Awards

Bond Up – Cross-Platform Social Application

Project: Personal Project | [App Store](#) | [Google Play](#)

- Engineered and launched a complete cross-platform mobile application using **Flutter** to help users strengthen relationships through shared activities.
- Successfully published and maintain the application on both the Apple App Store and Google Play Store.

Honorable Mention – 27th National Software Contest (NSC 2025) Project: BlinkDx – AI-Powered Blink Anomaly Detection

- Developed a deep learning system to detect blink irregularities for medical diagnosis with **95% accuracy**.
- Implemented computer vision models for real-time patient video analysis.

1st Prize – Hackathon: Unlocking the Potential of AI Engineering, Khon Kaen University 2024 Project: AI-Powered Bird Detection System

- Designed an AI system using cameras and laser automation to protect restricted areas.
- Achieved reliable detection under dynamic environmental conditions.

MUICT Open House Registration System (Next.js, Express.js) Project: Faculty Event Registration Website

- Developed and deployed a website for open house registration, efficiently handling **200+ participants per event**.
- Streamlined data collection and automated workflow for faculty events.

Education

Mahidol University, Faculty of Information and Communication Technology Bachelor of Science in ICT

Relevant Coursework: - Programming & Software Development: Object-Oriented Programming, Data Structures & Algorithms, Software Engineering, Mobile & Web Development

- **AI & Data Science:** Artificial Intelligence, Machine Learning, Data Science, Big Data Analytics
- **Systems & Infrastructure:** Computer Networks, Operating Systems, Cloud Computing, Cybersecurity
- **Other:** Project Management, ICT Ethics, Capstone Project