

ธีรพงศ์ ปานบุญยืน (Teerapong Panboonyuen)

* Research Scientist at **MARS (Motor AI Recognition Solution)**

* Postdoctoral Research Fellow at **Chulalongkorn University**

ข้อมูลติดต่อ

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ความสนใจ

Human-AI Interaction; Computer Vision; Large Language Models (LLMs); Applied Earth Observations; Geoscience

การศึกษา

นักวิจัยหลังปริญญาเอก (C2F)	2025 - 2026 จุฬาลงกรณ์มหาวิทยาลัย (คณะวิศวกรรมศาสตร์)
นักวิจัยหลังปริญญาเอก (RRF)	2021 - 2025 จุฬาลงกรณ์มหาวิทยาลัย (คณะวิศวกรรมศาสตร์)
ปริญญาเอกสาขาวิศวกรรมคอมพิวเตอร์	2017 - 2020 จุฬาลงกรณ์มหาวิทยาลัย (GPA: 4.00/4.00)
ปริญญาโทสาขาวิศวกรรมคอมพิวเตอร์	2015 - 2016 จุฬาลงกรณ์มหาวิทยาลัย (GPA: 4.00/4.00)
ปริญญาตรีสาขาวิศวกรรมคอมพิวเตอร์	2012 - 2015 พระจอมเกล้าพระนครเหนือ (คะแนนสูงสุด 1% แรกในคณิตศาสตร์มหาวิทยาลัย)
โรงเรียนเตรียมวิศวกรรม (PET21)	2010 - 2012 พระจอมเกล้าพระนครเหนือ (โรงเรียนมัธยมปลาย)

ประสบการณ์ทำงาน

นักวิทยาศาสตร์การวิจัยอาวุโส	2022 - ปัจจุบัน MARS (Motor AI Recognition Solution)
อาจารย์พิเศษ	2023 - ปัจจุบัน วิทยาลัยการคอมพิวเตอร์ มหาวิทยาลัยขอนแก่น

นักวิจัยหลังปริญญาเอก	2021 - ปัจจุบัน คณะวิศวกรรมศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย
นักวิจัยด้าน AI และนักวิทยาศาสตร์ข้อมูล	2020 - 2021 CJ Express Group และ CJ Express Tech (TILDI)
ผู้ช่วยสอนระดับบัณฑิตศึกษา	2015 - 2022 คณะวิศวกรรมศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

รางวัล

- ทุนการศึกษาเพื่อเฉลิมฉลองวโรกาสที่พระบาทสมเด็จพระเจ้าอยู่หัวทรงเจริญพระชนมายุครบ 72 พรรษา (ปริญญาโท)
- ทุนการศึกษาเพื่อเฉลิมฉลองครบรอบ 100 ปี จุฬาลงกรณ์มหาวิทยาลัย (ปริญญาเอก)
- ทุนการศึกษาเพื่อเฉลิมฉลองครบรอบ 90 ปี จุฬาลงกรณ์มหาวิทยาลัย (ปริญญาเอก)
- ทุน [Global Young Scientists Summit \(GYSS\)](#) จากกรมสมเด็จพระเทพรัตนราชสุดา เจ้าฟ้ามหาจักรีสิรินธร
- ทุนวิจัย Ratchadapisek Research Funds (RRF) สำหรับทุนหลังปริญญาเอก, จุฬาลงกรณ์มหาวิทยาลัย (2021-2025)
- ทุนวิจัย The Second Century Fund Office (C2F) สำหรับทุนหลังปริญญาเอก, จุฬาลงกรณ์มหาวิทยาลัย (2025-2026)
- คะแนนสูงสุด 1% ลำดับแรกในคณิตศาสตร์เชิงอนุพันธ์และคณิตศาสตร์วิศวกรรมของมหาวิทยาลัย
- รางวัลบทความที่ดีที่สุดในระดับนักศึกษาในการประชุมวิชาการนานาชาติด้านการคอมพิวเตอร์และเทคโนโลยีสารสนเทศ [IC2IT2017](#)
- รางวัลบทความนักวิจัยอายุน้อยที่ดีที่สุดในการประชุมวิชาการนานาชาติด้านเทคโนโลยีอัจฉริยะและการพัฒนาเมือง [STUD2019](#)
- ผู้ตรวจสอบบทความในวารสาร/การประชุมระดับนานาชาติ: ถูกละเลยยอดเพิ่มเติมได้ที่ [WOS ID: AAO-4985-2020](#)
- ผู้สำเร็จการวิ่งกรุงเทพมาราธอน 42.195 กม. (Bangkok Marathon ปี 2022)
- ผู้สำเร็จการแข่งขันไตรกีฬา IRONMAN 70.3 (IM70.3, Bang Saen ปี 2024) - ว่ายน้ำ 1.9K, จักรยาน 90K, วิ่ง 21K
- ผู้สำเร็จการแข่งขันไตรกีฬา Laguna Phuket Triathlon (LPT, Phuket ปี 2024) - ว่ายน้ำ 1.8K, จักรยาน 55K, วิ่ง 12K
- ผู้สำเร็จการวิ่งจอมบึงมาราธอน 42.195 กม. (Chombueng Marathon ปี 2025)

การตีพิมพ์

1. [Panboonyuen, Teerapong](#). SLICK: Selective Localization and Instance Calibration for Knowledge-Enhanced Car Damage Segmentation in Automotive Insurance. (2025) arXiv paper: <https://arxiv.org/abs/2506.10528>
2. [Panboonyuen, Teerapong](#). ALBERT: Advanced Localization and Bidirectional Encoder Representations from Transformers for Automotive Damage Evaluation. (2025) arXiv paper: <https://arxiv.org/abs/2506.10524>
3. [Panboonyuen, Teerapong](#). SEA-ViT: Sea Surface Currents Forecasting Using Vision Transformer and GRU-Based Spatio-Temporal Covariance Modeling. (KST2025). <https://ieeexplore.ieee.org/document/11003320>
4. [Panboonyuen, Teerapong](#). REG: Refined Generalized Focal Loss for Road Asset Detection on Thai Highways Using Vision-Based Detection and Segmentation Models. (KST2025). <https://ieeexplore.ieee.org/document/11003314/>

5. **Panboonyuen, Teerapong**, et al. GuidedBox: A Segmentation-Guided Box Teacher-Student Approach for Weakly Supervised Road Segmentation. **European Journal of Remote Sensing** (2024). [Pending acceptance] <https://kaopanboonyuen.github.io/GuidedBox>
6. **Panboonyuen, Teerapong**, et al. SatDiff: A Stable Diffusion Framework for Inpainting Very High-Resolution Satellite Imagery. **IEEE Access** (2025). <https://ieeexplore.ieee.org/document/10929005>
7. **Panboonyuen, Teerapong**, et al. MeViT: A Medium-Resolution Vision Transformer for Semantic Segmentation on Landsat Satellite Imagery for Agriculture in Thailand. **Remote Sensing** 15.21 (2023): 5124. <https://www.mdpi.com/2072-4292/15/21/5124>
8. **Panboonyuen, Teerapong**, et al. MARS: Mask Attention Refinement with Sequential Quadtree Nodes for Car Damage Instance Segmentation. **International Conference on Image Analysis and Processing**. Cham: Springer Nature Switzerland, 2023. https://link.springer.com/chapter/10.1007/978-3-031-51023-6_3
9. **Panboonyuen, Teerapong**, (Ph.D. thesis) Semantic Segmentation on Remotely Sensed Images Using Deep Convolutional Encoder-Decoder Neural Network. **Doctor of Philosophy, Chulalongkorn University Theses and Dissertations (Chula ETD). 8534. (2019). <https://digital.car.chula.ac.th/chulaetd/8534/>*
10. **Panboonyuen, Teerapong**, (Graduate thesis) Semantic Road Segmentation on Remotely-Sensed Images Using Deep Convolutional Neural Networks and Landscape Metrics. **Master of Engineering, Chulalongkorn University Theses and Dissertations (Chula ETD). (2016). <https://www.car.chula.ac.th/display7.php?bib=2156287>*
11. **Panboonyuen, Teerapong**, et al. Object Detection of Road Assets Using Transformer-Based YOLOX with Feature Pyramid Decoder on Thai Highway Panorama. **Information** 13.1 (2022): 5. <https://www.mdpi.com/2078-2489/13/1/5>
12. **Panboonyuen, Teerapong**, et al. Transformer-Based Decoder Designs for Semantic Segmentation on Remotely Sensed Images. **Remote Sensing** 13.24 (2021): 5100. <https://www.mdpi.com/2072-4292/13/24/5100>
13. **Panboonyuen, Teerapong**, et al. Semantic Labeling in Remote Sensing Corpora Using Feature Fusion-Based Enhanced Global Convolutional Network with High-Resolution Representations and Depthwise Atrous Convolution. **Remote Sensing** 12.8 (2020): 1233. <https://www.mdpi.com/2072-4292/12/8/1233>
14. **Panboonyuen, Teerapong**, et al. Semantic Segmentation on Remotely Sensed Images Using an Enhanced Global Convolutional Network with Channel Attention and Domain Specific Transfer Learning. **Remote Sensing** 11.1 (2019): 83. <https://www.mdpi.com/2072-4292/11/1/83>
15. **Panboonyuen, Teerapong**, et al. Road Segmentation of Remotely-Sensed Images Using Deep Convolutional Neural Networks with Landscape Metrics and Conditional Random Fields. **Remote Sensing** 9.7 (2017): 680. <https://www.mdpi.com/2072-4292/9/7/680>
16. **Panboonyuen, Teerapong**, et al. An Enhanced Deep Convolutional Encoder-Decoder Network for Road Segmentation on Aerial Imagery. **International Conference on Computing and Information Technology**. Springer, Cham, 2017. <https://www.mdpi.com/2072-4292/9/7/680>
17. **Panboonyuen, Teerapong**, et al. Image Vectorization of Road Satellite Data Sets. **Journal of Remote Sensing and GIS Association of Thailand** (2017). <https://learn.gistda.or.th>
18. Wichakam, I., **Panboonyuen, T.**, Udomcharoenchaikit, C., and Vateekul, P. Real-Time Polyps Segmentation for Colonoscopy Video Frames Using Compressed Fully Convolutional Network. **International Conference on Multimedia Modeling** (2018): 393-404. https://link.springer.com/chapter/10.1007/978-3-319-73603-7_32
19. Vajeethaveesin, T., **Panboonyuen, T.**, et al. A Performance Comparison between GIS-based and Neural Network Methods for Flood Susceptibility Assessment in Ayutthaya Province. **Trends in Sciences** 19.2 (2022): 2038. <https://tis.wu.ac.th/index.php/tis/article/view/2038>
20. Vateekul, P., **Panboonyuen, T.**, et al. Road Map Extraction from Satellite Imagery Using Connected Component Analysis and Landscape Metrics. **IEEE Big Data** (2017): 3435-3442. <https://ieeexplore.ieee.org/document/8258330>

21. Chantharaj, S., **Panboonyuen, T.**, et al. Semantic Segmentation on Medium-Resolution Satellite Images Using Deep Convolutional Networks with Remote Sensing Derived Indices. *JCSSE* (2018): 1-6. <https://ieeexplore.ieee.org/document/8457378>
22. Kantavat, P., **Panboonyuen, T.**, et al. Transportation Mobility Factor Extraction Using Image Recognition Techniques. *STUD 2019*. <https://ieeexplore.ieee.org/document/9018796>
23. Intarat, K., **Panboonyuen, T.**, et al. Enhanced Feature Pyramid Vision Transformer for Semantic Segmentation on Thailand Landsat-8 Corpus. *Information* (2022). <https://www.mdpi.com/2078-2489/13/5/259>
24. Thitisiriwech, K., **Panboonyuen, T.**, et al. The Bangkok Urbanscapes Dataset for Semantic Urban Scene Understanding Using Enhanced Encoder-Decoder Networks. *IEEE Access* (2022). <https://ieeexplore.ieee.org/document/9779212>
25. Thitisiriwech, K., **Panboonyuen, T.**, et al. Quality of Life Prediction in Driving Scenes on Thailand Roads Using Deep Convolutional Neural Networks. *Sustainability* 15.3 (2023): 2847. <https://www.mdpi.com/2071-1050/15/3/2847>
26. Intarat, K., **Panboonyuen, T.**, et al. Deep Residual Neural Networks with Self-Attention for Landslide Susceptibility Mapping in Uttaradit Province, Thailand. *GIS-IDEAS: Advancing Geospatial Innovation*. (2024). <https://gis-ideas.org/2024>
27. Nithisopa, N., **Panboonyuen, T.** (2025, February). DOTA: Deformable Optimized Transformer Architecture for End-to-End Text Recognition with Retrieval-Augmented Generation. In *2025 17th International Conference on Knowledge and Smart Technology (KST)* (pp. 301–306). IEEE.
28. Dechsupa, C., **Panboonyuen, T.**, Vatanawood. (2025). Towards AI-Augmented Formal Verification: A Preliminary Investigation of ENGRU and Its Challenges. IEEE Access.

ประสบการณ์วิจัยและการทำงานที่ผ่านมา

- **MARS, Senior Research Scientist**
(Motor AI Recognition Solution)
Manager: Naruepon Pornwiriyakul

 - Pioneered the development of the [MARS AI Model](#), presented at [ICIAP 2023, Italy](#).
 - Initiated projects on Explainable AI, Instance Segmentation, and Semantic Distillation.
 - Integrated [Agentic AI](#) as APIs for auto insurance and garage service enhancements.

Bangkok
2022–Present
- **Khon Kaen University, Visiting Faculty**
Special Lecturer in AI and Data Science
Coordinator: Chanon Dechsupa

 - Delivered courses such as [Artificial Intelligence](#) and [Smart Process Management](#).
 - Authored refined syllabi and received recognition via ministerial orders:
 - [Order 5907-2566](#).
 - [Orders 660301.26-24844](#), and [660101.26-13320](#).

Khon Kaen
2021–Present
- **CJ Express Group, AI Research Scientist (Department Manager)**
Data Innovation Laboratory
Managers: Narong Intiruk (CJ), Jarun Ngamvirojcharoen (TILDI)

 - Spearheaded the development of demand forecasting systems using [PySpark](#) and Cognitive Computing, significantly enhancing retail operational efficiency.
 - Optimized time-series forecasting for retail using advanced stats, machine learning (e.g., Gradient Boosting), and cutting-edge techniques like deep learning and ensemble methods.

Bangkok
2020–2021

- Engineered scalable solutions on [Google Cloud](#) to streamline data pipelines and ensure reliable model deployment in production environments.
 - Integrated [MLOps](#) practices to automate machine learning workflows, improving model lifecycle management and deployment efficiency.
- **Chulalongkorn University, Graduate Teaching Assistant** Bangkok
Machine Intelligence and Knowledge Discovery Lab 2016–2020
Mentor: Peerapon Vateekul
 - Co-taught courses like **Big Data Tools, Python, Data Science and Engineering**, among others. https://github.com/kaopanboonyuen/2110446_DataScience_2021s2
 - Delivered online courses on [Data Analytics and Big Data](#) through Chula MOOC.
 - Researched Transformer-based decoder designs, leveraging Swin Transformer to achieve state-of-the-art. <https://github.com/kaopanboonyuen/FusionNetGeoLabel>
 - **GISTDA, Freelance AI Specialist** Bangkok
(Geo-Informatics and Space Technology Development Agency) 2016–2020
Manager: Siam Lawawirojwong
 - Developed LULC mapping systems using Vision Transformers and Graph Neural Networks.
 - Built systems for forest fire classification in LANDSAT-8 satellite imagery.
 - **DEPA, AI Researcher (PT)** Bangkok
(Digital Economy Promotion Agency) 2019–2020
Coordinator: Preesan Rakwatin
 - Developed an unsupervised system to classify sugarcane plantations in Thailand using satellite imagery.
 - Designed and trained models for delineating sugarcane field boundaries in Thailand, employing [DETR](#) architectures with collaborative hybrid assignment training methodologies.
 - **Centaco Farm Company Limited, Data Scientist (PT)** Bangkok
Applied AI for Livestock 2019–2020
Manager: Ms. Kung, Doctor of Veterinary Medicine
 - Designed a [hatchability prediction](#) model for broiler chickens using regression analysis.
 - Solved quadratic relationships in breeder age and hatchability predictions.
 - **Bangkok Innovation House, Lead Data Science Mentor (PT)** Bangkok
Data Science Pathway Team, Chula MOOC 2018–2020
Manager: Pahnit Seriburi
 - Served as **Head TA** for the data science pathway team at [Chula MOOC](#).
 - Spearheaded volunteer teaching in Practical Data Analytics using RapidMiner and Python.
 - Delivered hands-on learning experiences, helping students gain practical skills in data science. <https://github.com/kaopanboonyuen/Python-Data-Science>
 - **Chulalongkorn University, Postdoctoral Researcher** Bangkok
Advancing Geoscience Laboratory 2021–Present
Co-authors: Chalermchon Satirapod (Head), Chaiyut Charoenphon
 - Researched sequence-to-sequence models for LULC classification on remote sensing corpora.
 - **NetDesign School, Python Programming Trainer (PT)** Bangkok
Training Program 2019–2019
 - Conducted Python programming training sessions at NetDesign School, located on the 4th floor of Siam Paragon, Bangkok.
 - Delivered beginner to intermediate-level Python courses, focusing on practical applications and problem-solving.

- Empowered students with foundational coding skills to pursue further studies or career opportunities in programming.
 - **Main Shipping Service, Computer Technical Support (PT)** Bangkok
 Network Infrastructure Team 2017–2020
 Managers: Mr. Deaw, Ms. Nueng
 - Designed and deployed functional networks, including WAN, LAN, and WLAN systems.
 - Configured and installed software, servers, and routers to ensure seamless operation.
 - Maintained detailed technical documentation and recommended improvements for network performance, capacity, and scalability.
 - Maintained detailed technical documentation and recommended improvements.
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การบริการชุมชนด้านวิจัย

- **Young Scientists Quickfire Pitch** GYSS2025
National University of Singapore, Singapore
 I presented MeViT, a Vision Transformer designed for high-precision segmentation of Landsat satellite images, at the Young Scientists Quickfire Pitch. This project aims to enhance geospatial data analysis using cutting-edge AI techniques. [More Details](#)
 - **Undergraduate Applied Mathematics Conference 2025** UAMC2025
KMITL, Bangkok, Thailand
 I presented my research at the Undergraduate Applied Mathematics Conference 2025, focusing on advanced topics in applied mathematics and their real-world applications. [More Details](#)
 - **Exploring Careers as an AI Research Scientist** 2024
NSTDA, Pathum Thani, Thailand
 I discussed AI careers with high school students, highlighting opportunities in academia, industry, and generative AI research. [More Details](#)
 - **Inspiring the Future of AI Innovations and Mastering LLM** 2024
KMUTNB, Bangkok, Thailand
 I delivered a keynote to undergraduate students, focusing on the transformative impact of AI and advancements in Large Language Models (LLMs), such as ChatGPT. [More Details](#)
 - **Geospatial Big Data Analytics** 2023
GISTDA, Pathum Thani, Thailand
 I conducted a session on leveraging PySpark and distributed machine learning to analyze large-scale geospatial datasets, emphasizing the importance of interactive visualization tools for decision-making. [More Details](#)
 - **Invited to Italy for ICIAP 2023 Presenting MARS Research** 2023
University of Udine, Italy
 I presented my research on MARS, a model enhancing instance segmentation for car damage evaluation, at the ICIAP 2023 Workshop. [More Details](#)
 - **Distributed Machine Learning Techniques for Geospatial Data** 2023
GISTDA, Pathum Thani, Thailand
 I led a course on distributed machine learning, focusing on PySpark and TensorFlow for geospatial data applications, teaching efficient multi-GPU training strategies. [More Details](#)
 - **Achieve Data Science First Meet** 2023
Victor Club, Samyan Mitrtown, Bangkok, Thailand
 I spoke at a student event on leveraging data science and AI to help organizations stay competitive in today's data-driven world. [More Details](#)
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การสอน

- **Visiting Faculty - College of Computing, Khon Kaen University** 2022 - Present
Khon Kaen, Thailand
I teach courses in Artificial Intelligence, Machine Learning, and Business Intelligence, including:
 - [SC310005 Artificial Intelligence and Machine Learning Application](#)
 - [CP020002 Smart Process Management](#)
 - [SC320002 Business Intelligence](#)
 - [CP020001 Introduction to Computers and Programming](#)
 - **Guest Lecturer and AI Committee Member - NSTDA One Day Camp** 2024
Sirindhorn Science Home, Thailand
Delivered a talk on AI research careers as part of the GYSS2025 scholarship program. [Full Blog and Slide](#)
 - **Modern Integrated Survey Technology - Chulalongkorn University** 2023
Bangkok, Thailand
Guided students in applying machine learning techniques to survey engineering problems. [Invitation Letter](#)
 - **AI Inspiration Course - Khon Kaen University** 2024
Khon Kaen, Thailand
Delivered a lecture on Generative AI: Current Trends and Practical Applications. [Lecture Slide](#)
 - **The 7th KVIS Invitational Science Fair** 2024
Kamnoetvidya Science Academy, Rayong, Thailand
Served as a committee member for the AI project evaluation. [Invitation Letter](#)
 - **Industrial Advisory Board (IAB) - ECE KMUTNB** 2024
Bangkok, Thailand
Contributed to curriculum assessment and provided feedback on course development. [Invitation Letter](#)
 - **AI and ML Instructor - Nomklao Kunnathi Demonstration School** 2021
Bangkok, Thailand
Taught AI and ML in the Design Graphics Science curriculum for Grade 10 students. [Invitation Letter](#)
 - **Deep Learning Instructor - Thammasat University** 2023
Bangkok, Thailand
Conducted a course on satellite data processing for advanced military and disaster missions. [Invitation Letter](#)
 - **Senior Project Advisor - Thammasat University** 2022
Bangkok, Thailand
Advised senior geography students on AI-related projects. [Invitation Letter](#)
 - **AI Instructor - Department of Lands, Thailand** 2024
Bangkok, Thailand
Delivered AI training on land title deed data analysis. [Course Link](#)
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ผู้ตรวจสอบบทความในวารสาร/การประชุมระดับนานาชาติ

- [ACM Transactions on Privacy and Security](#) (Publisher: ACM)
- [ACM Transactions on Knowledge Discovery from Data](#) (Publisher: ACM)
- [ACM Transactions on Intelligent Systems and Technology](#) (Publisher: ACM)
- [ACM Transactions on Autonomous and Adaptive Systems](#) (Publisher: ACM)

- [ACM Transactions on Transactions on Spatial Algorithms and Systems](#) (Publisher: ACM)
- [ACM Transactions on Multimedia Computing Communications and Applications](#) (TOMM)
- [Journal of Vibration and Control](#) (Publisher: Springer)
- [Biomedical Engineering/Biomedizinische Technik](#) (Publisher: Springer)
- [Food Bioengineering](#) (Publisher: Springer)
- [AI in Precision Oncology](#) (Publisher: Springer)
- [Acta Oceanologica Sinica](#) (Publisher: Springer)
- [Robotica](#) (Publisher: Springer)
- [Journal of Harbin Institute of Technology \(New Series\)](#) (Publisher: Springer)
- [Nuclear Science and Techniques](#) (Publisher: Springer)
- [European Journal of Remote Sensing](#) (Publisher: Taylor and Francis)
- [Geo-spatial Information Science](#) (Publisher: Taylor and Francis)
- [Computer Methods in Biomechanics and Biomedical Engineering](#)
- [Journal of Intelligent Transportation Systems: Technology, Planning, and Operations](#)
- [Journal of Spatial Science](#) (Publisher: Taylor and Francis)
- [Smart Science](#) (Publisher: Taylor and Francis)
- [Geocarto International](#) (Publisher: Taylor and Francis)
- [Smart Science](#) (Publisher: Taylor and Francis)
- [International Journal of Remote Sensing](#) (Publisher: Taylor and Francis)
- [International Journal of Image and Data Fusion](#) (Publisher: Taylor and Francis)
- [International Journal of Digital Earth](#) (Publisher: Taylor and Francis)
- [International Journal of Building Pathology and Adaptation](#) (Publisher: Taylor and Francis)
- [International Journal of Imaging Systems and Technology](#) (Publisher: Wiley) – **Certificate**
- [International Journal of Circuit Theory and Applications](#) (Publisher: Wiley)
- [Journal of Phytopathology](#) (Publisher: Wiley)
- [Transactions in GIS](#) (Publisher: Wiley) – **Certificate**
- [Applied AI Letters](#) (Publisher: Wiley) – **Certificate**
- [Engineering Reports](#) (Publisher: Wiley) – **Certificate**
- [Expert Systems](#) (Publisher: Wiley) – **Certificate**
- [IEEE Transactions on Pattern Analysis and Machine Intelligence](#) (PAMI)
- [IEEE Transactions on Geoscience and Remote Sensing](#) (Publisher: IEEE)
- [IEEE Transactions on Artificial Intelligence](#) (Publisher: IEEE)
- [IEEE Transactions on Big Data](#) (Publisher: IEEE)
- [IEEE Transactions on Medical Imaging](#) (Publisher: IEEE) – **Certificate**

- [IEEE Transactions on Image Processing](#) (Publisher: IEEE)
- [IEEE Transactions on Aerospace and Electronic Systems](#) (Publisher: IEEE)
- [IEEE Transactions on AgriFood Electronics](#) (Publisher: IEEE)
- [IEEE Transactions on Human-Machine Systems](#) (Publisher: IEEE)
- [IEEE Transactions on Circuits and Systems for Video Technology](#) (Publisher: IEEE)
- [IEEE Transactions on Radiation and Plasma Medical Sciences](#) (Publisher: IEEE)
- [IEEE Transactions on Emerging Topics in Computational Intelligence](#) (Publisher: IEEE)
- [IEEE Transactions on Computational Social Systems](#) (Publisher: IEEE)
- [IEEE Transactions on Vehicular Technology](#) (Publisher: IEEE)
- [IEEE Transactions on Systems, Man, and Cybernetics Systems](#) (Publisher: IEEE)
- [IEEE Access](#) (Publisher: IEEE)
- [IEEE MultiMedia](#) (Publisher: IEEE)
- [IEEE Consumer Electronics Magazine](#) (Publisher: IEEE)
- [IEEE Intelligent Systems](#) (Publisher: IEEE)
- [IEEE Journal of Biomedical and Health Informatics](#) (Publisher: IEEE)
- [PLOS ONE](#) (Publisher: PLOS)
- [IET Computer Vision](#) (Publisher: IET) – **Certificate**
- [IET Intelligent Transport Systems](#) (Publisher: IET) – **Certificate**
- [IET Smart Science](#) (Publisher: IET)
- [Electronics Letters](#) (Publisher: IET)
- [Remote Sensing](#) (Publisher: MDPI)
- [Forests](#) (Publisher: MDPI)
- [Agriculture](#) (Publisher: MDPI)
- [Agronomy](#) (Publisher: MDPI)
- [Mathematics](#) (Publisher: MDPI)
- [Sensors](#) (Publisher: MDPI)
- [Energies](#) (Publisher: MDPI)
- [Symmetry](#) (Publisher: MDPI)
- [ISPRS International Journal of Geo-Information](#) (Publisher: MDPI)
- [Big Data and Cognitive Computing \(BDCC\)](#) (Publisher: MDPI)
- [Mathematical and Computational Applications \(MCA\)](#) (Publisher: MDPI)
- [Processes](#) (Publisher: MDPI)
- [International Journal of Geo-Information \(IJGI\)](#) (Publisher: MDPI)
- [International Journal of Pattern Recognition and Artificial Intelligence](#)

- [Journal of Vibration and Control](#) (Publisher: SAGE)
 - [Research Methods in Medicine and Health Sciences](#) (Publisher: SAGE)
 - [International Journal of High Performance Computing Applications](#) (Publisher: SAGE)
 - [Ultrasonic Imaging](#) (Publisher: SAGE)
 - [Composites and Advanced Materials](#) (Publisher: SAGE)
 - [Science Progress](#) (Publisher: SAGE)
 - [Part D: Journal of Automobile Engineering](#) (Publisher: SAGE)
 - [Human-centric Computing and Information Sciences](#) (Publisher: SpringerOpen)
 - [Journal of Computational Methods in Science and Engineering](#) (Publisher: IOS Press)
 - [Journal of Chemical Engineering of Japan](#) (Publisher: Society of Chemical Engineers, Japan)
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 - [Majlesi Journal of Electrical Engineering](#) (Publisher: Majlesi University)
 - [Computational Intelligence and Neuroscience](#) (Publisher: Hindawi)
 - [Industrial Lubrication and Tribology](#) (Publisher: Emerald Group Publishing Ltd.)
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 - [International Journal of Crowd Science](#) (Publisher: Emerald Group Publishing Ltd.)
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 - [Open Geosciences](#) (Publisher: De Gruyter)
 - [GMSARN International Journal](#) (Publisher: GMSARN)
 - [Machine Intelligence Research](#) (Publisher: Engineered Science)
 - [Engineered Science](#) (Publisher: Engineered Science)
 - [Digital Transportation and Safety](#) (Publisher: Inderscience)
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ข่าว

- **The Leader Asia:** Dr. Teerapong and his team introduced their advanced AI for car damage detection at ICIAP 2023 in Udine, setting new accuracy standards with their innovative MARS model. Retrieved from: <https://theleaderasia.com>
- **Techsauce:** Highlighted their AI technology for automatic car damage assessment, earning recognition for excellence at ICIAP 2023 in Italy. Retrieved from: <https://techsauce.co>
- **LINE TODAY:** Showcased the MARS model at ICIAP 2023, noted for its high accuracy and setting new global standards in car damage detection. Retrieved from: <https://today.line.me>
- **Moneychat:** Reported the award-winning innovation in AI for car damage estimation presented at ICIAP 2023. Retrieved from: <https://moneychat.co.th>
- **Kaohoon:** Celebrated the award-winning success of MARS at ICIAP 2023. Retrieved from: <https://www.kaohoon.com>

- **Mitistock:** Introduced the MARS model, featuring advanced self-attention mechanisms for vehicle damage assessment in Thailand. Retrieved from: <https://www.mitihoon.com>
 - **The Story Thailand:** Presented cutting-edge AI techniques in car wound detection, achieving high accuracy and setting international benchmarks. Retrieved from: <https://www.thestorythailand.com>
 - **Media of Thailand:** Unveiled the MARS model at ICIAP 2023, recognized globally for its precision in car damage detection. Retrieved from: <https://www.mediaofthailand.com>
 - **Thailand Insurance News:** Featured Dr. Teerapong's MARS model at ICIAP 2023 for its groundbreaking accuracy in car damage detection. Retrieved from: <https://thailandinsurancenews.com>
 - **Chulalongkorn University:** Published a study on semantic road segmentation using deep convolutional neural networks. Retrieved from: <https://www.car.chula.ac.th>
 - **Chula Engineering News:** Featured Dr. Teerapong's participation in the Global Young Scientists Summit (GYSS) 2025, highlighting academic leadership and global collaboration. Retrieved from: eng.chula.ac.th
 - **Thaivivat Insurance:** Announced Dr. Teerapong's research recognition at UAMC 2025, emphasizing advancements in AI for urban analytics and mobility challenges. Retrieved from: thaivivat.co.th
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ทักษะ

- **ภาษาโปรแกรม:** Python, Java, Processing, C, R, MATLAB, Golang
 - **เทคโนโลยี:** GCP, AWS, Docker-Compose, Kubernetes, Streamlit, Swagger UI, API
 - **เว็บและเทคโนโลยีพื้นฐาน:** HTML, CSS, JavaScript, RESTful Web Services
 - **ซอฟต์แวร์และเครื่องมือ:** Git, RapidMiner Studio, Looker Studio, Tableau, Power BI
 - **ห้องสมุดการเรียนรู้ของเครื่อง:** PyTorch, TensorFlow, Keras, Theano, Pandas, Scikit-Learn, PEFT (Parameter-Efficient Fine-Tuning)
 - **ห้องสมุดและเครื่องมือ AI:** Hugging Face, Gradio, DeepSeek, SegmentAnything, QWEN, ChatGPT, Gemini, Claude, OpenAI API, OCR (Optical Character Recognition)
 - **การประเมินโมเดล:** Weights and Biases (WandB), TensorBoard, Streamlit
 - **เทคนิค AI ขั้นสูง:** การสร้างผลลัพธ์ด้วยการดึงข้อมูล (RAG), โมเดลภาษาขนาดใหญ่ (LLMs), การปรับแต่งโมเดล (Fine-Tuning), การเรียนรู้ข้ามโดเมน (Cross-Domain Learning)
 - **การวิจัย AI และการสร้างโมเดลใหม่:** การออกแบบและการพัฒนาโมเดล AI สมัยใหม่ เช่น การใช้งานโมเดล Transformer, Diffusion Models, และ Generative Adversarial Networks (GANs)
 - **เครื่องมือและเทคนิคการวิจัย:** การใช้ Distributed Computing Frameworks เช่น Ray, Dask และ Horovod เพื่อเพิ่มประสิทธิภาพการฝึกสอนโมเดล AI ขนาดใหญ่
 - **การประเมินและวิเคราะห์โมเดล AI:** การใช้เทคนิคการตรวจสอบเชิงลึก (Explainability) และ Fairness ในโมเดล AI เช่น SHAP, LIME, และ Fairness Indicators เพื่อการทดสอบและประเมินคุณภาพของโมเดล
 - **GitHub:** มาตรฐานโค้ดและสิ่งของผมกำลังสร้างที่ <https://github.com/kaopanboonyuen>
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Get to Know Me Better

- **Tech Enthusiast and Endurance Athlete**

I'm passionate about leveraging technology to create meaningful impact. Outside of coding and AI research, I challenge myself with marathons and triathlons, pushing both physical and mental boundaries—embracing endurance as a metaphor for continuous growth.

- **AI and Machine Learning Advocate**

With deep expertise in state-of-the-art AI, I develop solutions powered by transformer architectures, large language models (LLMs), and agentic AI systems. I specialize in applying model distillation and teacher-student frameworks to optimize performance while maintaining scalability.

- **Generative AI Explorer**

Fascinated by generative models like Stable Diffusion and GANs, I experiment with synthesizing data and enhancing inputs for complex problems, pushing the boundaries of what AI-generated content can achieve in real-world applications.

- **Lifelong Learner**

I continuously absorb new knowledge—from the latest advances in reinforcement learning to breakthroughs in AI ethics—always eager to deepen my understanding and translate insights into innovative solutions.

- **Passionate About Mentorship**

I'm committed to cultivating talent by mentoring engineers and data scientists, sharing expertise on advanced AI techniques, and fostering a culture of curiosity and continuous learning.

- **Adaptable and Solution-Oriented**

Whether architecting custom transformer-based models or guiding cross-functional teams, I thrive in dynamic environments by delivering creative, efficient, and data-driven AI solutions.

- **Innovative Problem Solver**

I approach challenges with a blend of creativity and technical rigor—optimizing algorithms, integrating cutting-edge architectures, and experimenting with novel AI paradigms to enhance system intelligence.

- **Community-Oriented**

Volunteering and knowledge sharing keep me grounded. I enjoy engaging with tech communities to exchange ideas and contribute to collective growth and innovation.

- **Team Player and Leader**

I foster trust and collaboration, empowering teams to innovate through transparent communication and shared ownership, leading with empathy and vision in complex AI projects.

- **Tech Trends Enthusiast**

I stay at the forefront of emerging tech—from quantum computing to the latest in LLM architectures—and enjoy exploring how these trends can reshape industries and society.

- **Data-Driven Decision Maker**

Data informs every decision I make, driving research and strategic initiatives with evidence-based insights to maximize impact.

- **Let's Connect!**

If you're interested in discussing tech, research, or want to share stories about the latest gadgets, feel free to reach out to me at panboonyuen.kao@gmail.com.

- **About Me¹**

I'm [Teerapong Panboonyuen](#), but you can call me [Kao Panboonyuen](#) or just [Kao](#).

in Thai: [ธีรพงศ์ ปานบุญยืน \(เก้า\)](#)

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