

# Kun-Hsiang Lin

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## Experience

<b>AI Consultant</b> , Authme	Sep. 2023 – Feb. 2025
<b>AI Team Lead</b> , Authme	Jan. 2021 – Aug. 2023
<b>Senior CV/ML Engineer</b> , Authme	Oct. 2019 – Feb. 2025
<ul style="list-style-type: none"><li>• Spearheaded the development of core AI algorithms for key products, delivering both client-side and server-side solutions that met customer requirements, enhanced market competitiveness, and shaped product planning through expert feasibility assessments and detailed blueprints.</li><li>• Led cross-platform C++ SDK integration (Android, iOS, WebAssembly), resolving cross-functional challenges between client and backend teams to ensure seamless AI feature delivery and system interoperability.</li><li>• Developed 20+ proprietary AI algorithms from scratch, covering Face Processing, Facial Recognition, RGB-based Face Anti-Spoofing, OCR, Knowledge Information Extraction, and Anti-Fraud.</li><li>• Built end-to-end MLOps pipelines, including data analysis, model training, evaluation, deployment, inference, monitoring, and continuous iteration to ensure robust, production-ready AI systems.</li></ul>	

### Highlights

- 2024 – NIST FRTE 1:1 (USA): Ranked 44/371 on Visa-Border dataset; Top 1 in Taiwan
- 2023 – FIME ISO Verification: Achieved ISO/IEC 30107-3 compliance; First in Taiwan
- 2023 – Taiwan AI Award, AI Taiwan Future Conference
- 2023 – Presidential Hackathon Taiwan: Top 20 of 166 teams
- 2023 – CVPR 4th Face Anti-Spoofing Challenge: Ranked 16/66 globally, Top 1 in Taiwan
- 2021 – ICCV Masked Face Recognition Challenge: Ranked 5/160 globally, Top 1 in Taiwan
- 2021 – Cathay Financial: eKYC PoC, Top 1 – 1/5
- 2021 – Standard Chartered: eKYC PoC, Top 1 – 1/4
- 2020 – Taiwan RegTech eKYC Challenge: Group Champion
- 2019 – Line Bank: Face SDK PoC, Top 1 – 1/3

<b>Research assistant</b> , DMID Lab, IIS, Academia Sinica	Aug. 2017 – Sep. 2019
<ul style="list-style-type: none"><li>• Develop a spatial-temporal deep model on typhoon rainfall nowcasting.</li><li>• External reviewers for ML/DM conferences such as NIPS, KDD, ICML, etc.</li></ul>	
<b>Research assistant</b> , Hydraulic and Ocean Engineering, NCKU	Jul. 2017 – Sep. 2017
<ul style="list-style-type: none"><li>• Built a drought warning system with C language for the local government.</li></ul>	

## Education

<b>National Taiwan University</b> , Ph.D. in Computer Science and Information Engineering	Sep. 2024 – Present
<ul style="list-style-type: none"><li>• <b>Research fields:</b> Computer Vision, Domain Generalization, Anomaly Detection, VLMs, MLLMs</li><li>• <b>Adivisor:</b> <a href="#">Wen-Huang Cheng</a></li><li>• <b>GPA:</b> 4.15 / 4.3</li></ul>	
<b>National Taiwan University</b> , M.S.E. in Computer Science and Information Engineering	Sep. 2023 – Jun. 2024
<ul style="list-style-type: none"><li>• <b>GPA:</b> 4.12 / 4.3 (Rank#1)</li></ul>	
<b>National Chen Kung University</b> , M.S.E. in Hydraulic and Ocean Engineering	Sep. 2014 – Jun. 2016
<ul style="list-style-type: none"><li>• <b>Thesis:</b> <a href="#">Comparison of SVM and RF for Hourly Typhoon Rainfall Forecasting</a></li><li>• <b>Adivisor:</b> <a href="#">Pao-Shan Yu</a></li><li>• <b>GPA:</b> 3.81 / 4.0 (Rank#1)</li><li>• 2016 Scholarship of Chi-Hsin Agricultural Development Foundation (Rank#1 in hydraulic engineering)</li></ul>	
<b>National Chen Kung University</b> , B.E. in Hydraulic and Ocean Engineering	Sep. 2010 – Jun. 2014
<ul style="list-style-type: none"><li>• <b>GPA:</b> 2.94 / 4.0</li></ul>	

## Technologies

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### Machine Learning & AI

- Frameworks & Libraries: PyTorch, Lightning, TensorFlow, ONNX, ONNXRuntime
- Expertise: Computer Vision, Biometric AI (Face), Anomaly Detection, VLMs, MLLMs, Digital Image Processing, Model Optimization, Distributed Training, Edge ML, MLOps

### Software Engineering

- Languages & Tools: Python, C/C++ , Bash Scripting, GitFlow, Docker
- Practices: DevOps, Test-Driven Development, Algorithm Design & Implementation

### Research & Leadership

- Experience: AI Algorithm Innovation, Research Prototyping, Team Management

## Publications

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### **InstructFLIP: Exploring Unified Vision-Language Model for Face Anti-spoofing**

*Lin, K. H.*, Tseng, Y. W., Huang, K. Y., Wu, J. C., Cheng, W. H.

ACM International Conference on Multimedia, Oct. 2025 — Top-tier in Multimedia

### **Predictor Selection Method for the Construction of SVM-based Typhoon Rainfall Forecasting Models using a Non-dominated Sorting Genetic Algorithm**

Yang, T. C., Yu, P. S., *Lin, K. H.*, Kuo, C. M., Tseng, H. W.

Meteorological applications, Oct. 2018 — SCI-indexed Journal

### **An Acceptable Framework to Predict the Flood Stage Under Climate Change Scenarios - A Case Study in Taipei Basin**

Wu, P. Y., *Lin, K. H.*

Asia Oceania Geosciences Society Annual Meeting, Jul. 2017 — Poster, Top-tier in Hydraulic Engineering

### **A Comparison of Hourly Typhoon Rainfall Forecasting Models Based on Support Vector Machines and Random Forests with Different Predictor Sets**

*Lin, K. H.*, Tseng, H. W., Kuo, C. M., Yang, T. C., Yu, P. S.

EGU General Assembly, Apr. 2016 — Oral, Top-tier in Hydraulic Engineering

### **The Application of Support Vector Machine and Random Forest on Precipitation Forecasting**

*Lin, K. H.*, Tseng, H. W., Kuo, C. M., Yang, T. C., Yu, P. S.

Conference on Computer Applications in Civil and Hydraulic Engineering, Sep. 2015 — Best Student Paper Award

### **A Comparison of Random Forests and Support Vector Machine in River Stage Forecasting**

*Lin, K. H.*, Tseng, H. W., Kuo, C. M., Yang, T. C., Yu, P. S.

Asia Oceania Geosciences Society Annual Meeting, Jul. 2015 — Oral, Top-tier in Hydraulic Engineering

## Projects

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### **Capybara: Python Toolkit for Computer Vision Task**

- Developed an image processing and deep learning toolkit with modules for vision tasks, structured data handling, ONNX inference, and test coverage.

### **Chameleon: Python Toolkit for Developing AI Models**

- Designed a modular DL framework with reusable components and training utilities for rapid prototyping.

### **DocClassifier: Document Image Classification System**

- Built a metric learning-based classification system enhanced with ImageNet-1K and CLIP embeddings; achieved 90%+ accuracy with high inference speed and scalability.

### **FaceDetection: Efficient Face Detection Training Module**

- Built on SCRFD with custom enhancements, the face-detection-XL model achieved SOTA on WIDERFace with mAPs of 0.965 (Easy), 0.951 (Medium), and 0.845 (Hard), offering strong efficiency.

### **TWLLM-Tutor: Revolutionizing Taiwanese Secondary Education with Large Language Model**

- Developed an AI-based education system using a customized GSAT dataset and LLM tuning methods to support learning in underserved regions.