# Kun-Hsiang Lin

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## Experience

AI Consultant, Authme
Sep. 2023 – Feb. 2025
AI Team Lead, Authme
Jan. 2021 – Aug. 2023
Senior CV/ML Engineer, Authme
Oct. 2019 – Feb. 2025

- 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.
- 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.
- Developed 20+ proprietary AI algorithms from scratch, covering Face Processing, Facial Recognition, RGB-based Face Anti-Spoofing, OCR, Knowledge Information Extraction, and Anti-Fraud.
- 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.

### 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

#### Research assistant, DMID Lab, IIS, Academia Sinica

Aug. 2017 – Sep. 2019

- Develop a spatial-temporal deep model on typhoon rainfall nowcasting.
- External reviewers for ML/DM conferences such as NIPS, KDD, ICML, etc.

#### Research assistant, Hydraulic and Ocean Engineering, NCKU

Jul. 2017 – Sep. 2017

• Built a drought warning system with C language for the local government.

### Education

National Taiwan University, Ph.D. in Computer Science and Information Engineering

Sep. 2024 – Present

- Research fields: Computer Vision, Domain Generalization, Anomaly Detection, VLMs, MLLMs
- Adivisor: Wen-Huang Cheng
- **GPA:** 4.15 / 4.3

National Taiwan University, M.S.E. in Computer Science and Information Engineering

Sep. 2023 – Jun. 2024

• **GPA:** 4.12 / 4.3 (Rank#1)

National Chen Kung University, M.S.E. in Hydraulic and Ocean Engineering

Sep. 2014 – Jun. 2016

- Thesis: Comparison of SVM and RF for Hourly Typhoon Rainfall Forecasting
- Adivisor: Pao-Shan Yu
- **GPA:** 3.81 / 4.0 (Rank#1)
- 2016 Scholarship of Chi-Hsin Agricultural Development Foundation (Rank#1 in hydraulic engineering)

National Chen Kung University, B.E. in Hydraulic and Ocean Engineering

Sep. 2010 - Jun. 2014

• **GPA:** 2.94 / 4.0

## **Technologies**

## **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**

## 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**

#### 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.