

# 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 design and 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 globally on the Visa-Border dataset; Top 1 in Taiwan
- 2023 – FIME Biometric ISO Standards Verification: Achieved ISO/IEC 30107-3 compliance; First in Taiwan
- 2023 – AI Taiwan Future Commerce – Taiwan AI Award
- 2023 – Presidential Hackathon in Taiwan: Placed Top 20 out of 166 national teams
- 2023 – CVPR 4th Face Anti-Spoofing Competition: Ranked 16/66 globally; Top 1 in Taiwan
- 2021 – ICCV Masked Face Recognition Challenge & Workshop: Ranked 5/160 globally; Top 1 in Taiwan
- 2021 – Cathay Financial Holdings Co., Ltd. – eKYC Algorithm PoC Top 1 – 1/5
- 2021 Standard Chartered – eKYC PoC Top 1 – 1/4
- 2020 – Taiwan RegTech Challenge: Champion in the eKYC Group
- 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, etc.</li><li>• <b>Adivisor:</b> Wen-Huang Cheng</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> Comparison of SVM and RF for Hourly Typhoon Rainfall Forecasting.</li><li>• <b>Adivisor:</b> Pao-Shan Yu</li><li>• <b>GPA:</b> 3.81/4 (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</li></ul>	

## Technologies

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### Machine Learning & AI

- Frameworks & Libraries: PyTorch, Lightning, TensorFlow, Albumentations, ONNX, ONNXRuntime.
- Expertise: Computer Vision, Biometric AI (Face), Anomaly Detection, VLMs, MLLMs, Model Optimization, Distributed Training, Edge ML, Digital Image Processing, 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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<b>InstructFLIP: Exploring Unified Vision-Language Model for Face Anti-spoofing</b> <i>Lin, K. H.</i> , Tseng, Y. W., Huang, K. Y., Wu, J. C., Cheng, W. H. 2025 ACM Multimedia. (rank#1 in multimedia)	Oct. 2025
<b>Predictor selection method for the construction of SVM-based typhoon rainfall forecasting models using a non-dominated sorting genetic algorithm.</b> Yang, T. C., Yu, P. S., <i>Lin, K. H.</i> , Kuo, C. M., Tseng, H. W. Meteorological applications. (SCI journal)	Sep. 2018
<b>A Comparison of Hourly Typhoon Rainfall Forecasting Models Based on Support Vector Machines and Random Forests with Different Predictor Sets.</b> <i>Lin, K. H.</i> , Tseng, H. W., Kuo, C. M., Yang, T. C., Yu, P. S. 2016 EGU General Assembly. (rank#1 in hydraulic engineering, oral)	Apr. 2016
<b>A Comparison of Random Forests and Support Vector Machine in River Stage Forecasting</b> <i>Lin, K. H.</i> , Tseng, H. W., Kuo, C. M., Yang, T. C., Yu, P. S. 2015 AOGS 12th Annual Meeting. (rank#3 in hydraulic engineering, oral)	Jul. 2015
<b>The application of support vector machine and random forest on precipitation forecasting</b> <i>Lin, K. H.</i> , Tseng, H. W., Kuo, C. M., Yang, T. C., Yu, P. S. 2015 CCACHE. (oral, best student paper award)	Jul. 2015

## Projects

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<b>Python toolkit for computer vision task</b> • An image processing and deep learning toolkit with modules for vision tasks, structured data, ONNX inference, utilities, and test coverage. • Tools Used: Python	Capybara
<b>Python toolkit for developing AI models</b> • This project offers a lightweight development toolkit featuring modular components and helpful utilities for training PyTorch-based models. • Tools Used: Python	Chameleon
<b>Document image classification system</b> • A document image classification using Metric Learning, enhanced with ImageNet-1K and CLIP. Achieves 90%+ accuracy with fast ONNX inference and high scalability for real-world use. • Tools Used: Python	DocClassifier
<b>Face detection</b> • Built upon SCRFD with innovative enhancements, the face detection model face-detection-XL achieved SOTA performance on the WIDERFace evaluation with competitive computational efficiency, recording mAP scores of 0.965 (Easy), 0.951 (Medium), and 0.845 (Hard). • Tools Used: Python	FaceDetection