Yu-Fan (Van) Lin

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Employment History

2024.03 – 2024.05 **Research Intern**
Scenario understanding and augmented intelligence, Industrial Technology Research Institute (ITRI)

Education

2024.07 – now **Master, National Cheng Kung University** Institute of Data Science.
Research Topics: Computer Vision, Image Processing, Low-level Vision, Multimodal Learning
Advisor: Prof. *Chih-Chung Hsu*

2022.02 – 2024.06 **Bachelor, National Chung Hsing University** Applied Mathematics.
GPA:3.94/4.3
Thesis title: *Developing an Automatic Prohibited Items Detection Model for Airport Luggage X ray Images Based on the Integration of Convolutional Neural Networks and Visual Transformers.*
Advisor: Prof. *Chih-En Kuo*

2020.09 – 2022.02 **Bachelor, National Kaohsiung University of Science and Technology** Telecommunication Engineering.
GPA:4.3/4.3
Thesis title: *An Intelligent Human-in-the-Loop Biometric Feedback System for Shooting Proficiency Enhancement.*
Advisor: Prof. *Huang-Chu Huang*

Research Publications

Conference Proceedings

1. C.-H. Cheng, **Y.-F. Lin**, C.-M. Lee, C.-C. Hsu, Y.-L. Shih, and C. Ting, "A Multi-Stage Deep Learning Pipeline for Crack Detection and Segmentation in High-Speed Rail Brake Discs," in *2025 IEEE International Conference on Consumer Technology (ICCT-Pacific)*, 2025.
2. C.-C. Hsu, C.-M. Lee, **Y.-F. Lin**, Y.-S. Chou, C.-Y. Jian, and C.-H. Tsai, "Revisiting vision-language features adaptation and inconsistency for social media popularity prediction," in *Proceedings of the 32nd ACM International Conference on Multimedia (ACMMM)*, ser. MM '24, Melbourne VIC, Australia: Association for Computing Machinery, 2024, pp. 11 464–11 469, ISBN: 9798400706868. DOI: 10.1145/3664647.3689000.

Under Peer-review

1. C.-M. Lee, C.-H. Cheng, **Y.-F. Lin**, *et al.*, *Prompthsi: Universal hyperspectral image restoration with vision-language modulated frequency adaptation*, Sumitted to 2025 IEEE/CVF International Conference on Computer Vision (ICCV), 2025.

2. C.-M. Lee, C.-J. Kang, C.-H. Cheng, *et al.*, *Aurorahsi: Degradation-agnostic hyperspectral image fusion transformer via mask-guided information sharing and compensation*, Sumitted to 2025 IEEE/CVF International Conference on Computer Vision (ICCV), 2025.

3. C.-M. Lee, **Y.-F. Lin**, Y.-H. Ho, L.-W. Kang, and C.-C. Hsu, *Hyfusion: Enhanced reception field transformer for hyperspectral image fusion*, Sumitted to IEEE International Symposium on Geoscience and Remote Sensing (IGARSS), 2025.

4. C.-M. Lee, **Y.-F. Lin**, L.-W. Kang, and C.-C. Hsu, *Robust hyperspectral image panshapring via sparse spatial-spectral representation*, Sumitted to IEEE International Symposium on Geoscience and Remote Sensing (IGARSS), 2025.

Technical Reports

1. B. Kiefer, L. Žust, f. Lin, *et al.*, *3rd workshop on maritime computer vision (macvi) 2025: Challenge results*, Technical Report of IEEE Workshop on Applications of Computer Vision (WACV), 3rd Workshop on Maritime Computer Vision (MaCVi), USV-based Embedded Obstacle Segmentation Challenge, 2025.

2. **Y.-F. Lin**, B.-C. Qiu, C.-M. Lee, and C.-C. Hsu, *Divide and conquer: Grounding a bleeding areas in gastrointestinal image with two-stage model*, Technical Report of IEEE International Conference on Image Processing (ICIP), Auto-WCEBleedGen Challenge V2 Challenge, 2025.

3. Z. Chen, R. Timofte, **Y.-F. Lin**, *et al.*, *Ntire 2024 challenge on image super-resolution (x4): Methods and results*, Technical Report of IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), New Trends in Image Restoration and Enhancement Workshop and Associated Challenges, 2024.

4. **Y.-F. Lin**, C.-H. Cheng, C.-C. Hsu, and C.-M. Lee, *Simple 2d convolutional neural network-based approach for covid-19 detection*, Technical Report of IEEE International Conference on Pattern Recognition (ICPR), Automated Crop Disease Diagnosis from Hyperspectral Imagery Challenge, 2024.

Academic Service

Paper Reviewer

Conference Paper Reviewer — IJPRAI25

Miscellaneous Experience

Teaching Experience

2024 Fall — **Machine Learning (DS6012)**, National Cheng Kung University.

2024 Spring — **Deep Learning (DS6016)**, National Cheng Kung University.

Industrial Project History

2024.07 – — **Brake system Defect Detection**. Collaborated with Taiwan High Speed Rail.

2024.04 – — **Cybersecurity in Distributed Computing for Remote Sensing**. Collaborated with NVIDIA Taiwan Research.

2024.03 – 2025.04 — **Scenario understanding and augmented intelligence**. Collaborated with Industrial Technology Research Institute (ITRI)..

Awards and Achievements

2025.03 — **Winner (3/304)**, NTIRE Single Image Shadow Removal Challenge, IEEE/CVF Computer Vision & Pattern Recognition (CVPR).

Winner (6/244), NTIRE 2025 Single Image Reflection Removal in the Wild Challenge, IEEE/CVF Computer Vision & Pattern Recognition (CVPR).

Miscellaneous Experience (continued)

2024.07 **Winner**, Beyond Visible Spectrum: AI for Agriculture Challenge, International Conference on Pattern Recognition (ICPR).

2024.05 **Top Performance Award**, Socia Media Popularity Prediction Challenge, ACM International Conference on Multimedia (ACMMM).

2024.03 **Runner-up (2/1200+)**, Auto-WCEBleedGen Challenge Version V2, IEEE International Conference on Image Processing (ICIP).

Presidential Award, Department of Applied Mathematics (Data Science and Computing Program).

2023.10 **Presidential Award**, Department of Applied Mathematics (Data Science and Computing Program).

2021.10 **Runner-up (2/30+)**, Second XRun! Motion Sensing Technology Innovation Competition.

2021.08 **Titanium Medal Award (Top 10%)**, Green Idea Invention and Design Fair.

2018.06 **Winner (1/1500+)**, Asian Robotic Athletic Competition.

Scholarship

2024.12 **8th Foxconn Scholarship recipient**.

Nan Shan Life Insurance Company Scholarship..

2020.12 **4th Foxconn Scholarship recipient**.

Skills

Languages Strong reading, writing and speaking competencies for English, Mandarin Chinese.

Coding Java, Python, C, C++, SQL, LaTeX, …

Databases MySQL, PostgreSQL, SQLite.

References

Available on Request