Chia-Ming Lee

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EDUCATION

National Cheng Kung University (NCKU)   [Sept-2023 ~ Present]

M.S. in Institute of Data Science and Department of Statistic   Advisor: Prof. Chih-Chung Hsu

- *Research Interests: Image/Video Processing and Analysis, Hyperspectral Image, Multi-modality Learning, Deepfake Analysis*

Fu Jen Catholic University (FJCU)   [Sept-2019 ~ Jun-2023]

B.S. in Department in Statistics and Information Science   Advisor: Prof. Hao-Chiang Shao

RESEACH EXPERIENCE

Institute of Data Science, National Cheng Kung University (NCKU)   [Feb-2023 ~ Jun-2023]

Adjunct Research Assistant   Advisor: Prof. Chih-Chung Hsu

PUBLICATIONS   **Google Scholar Profile:** https://scholar.google.com/citations?user=koBVaaUAAAAJ

Journal Articles

[J1]   Chih-Chung Hsu, Chih-Yu Jian, Eng-Shen Tu, **Chia-Ming Lee**, Guan-Lin Chen, "Real-Time Compressed Sensing for Joint Hyperspectral Image Transmission and Restoration for CubeSat", IEEE Transactions on Geoscience and Remote Sensing (**TGRS**).

[J2]   Chih-Chung Hsu, Chih-Chien Ni, **Chia-Ming Lee**, Li-Wei Kang, "CSA-KD: Knowledge Distillation with Cross Self-Attention for Hyperspectral and Multispectral Images Fusion", IEEE Transactions on Geoscience and Remote Sensing (**TGRS**). [Under Review]

Conference Papers

[C1]   Chih-Chung Hsu, Chih-Yu Jian, **Chia-Ming Lee**, Chi-Han Tsai, Shen-Chieh Tai, "Bag of Tricks of Hybrid Network for Covid-19 Detection of CT Scans", IEEE International Conference on Acoustics, Speech, and Signal Processing (**ICASSP**), AI-enabled Medical Image Analysis Workshop, Rhodes, Greece, 2023.

[C2]   Chih-Chung Hsu, Chih-Yu Jian, **Chia-Ming Lee**, Chi-Han Tsai, Shen-Chieh Tai, "Strong Baseline and Bag of Tricks for COVID-19 Detection of CT Scans", IPPR Conference on Computer Vision, Graphics, and Image Processing (**CVGIP**), Kinman, Taiwan, 2023

[C3]   Chih-Chung Hsu, **Chia-Ming Lee**, Xiu-Yu Hou, Chi-Han Tsai, "Identity is All you Need: Toward Accurate Popularity Prediction For Social Media", IPPR Conference on Computer Vision, Graphics, and Image Processing (**CVGIP**), Kinman, Taiwan, 2023

[C4]   Chih-Chung Hsu, **Chia-Ming Lee**, Ming-Husan Wu, "MISS: Memory Efficiency Instance Segmentation Framework By Visual Inductive Priors Flow Propagation", IEEE/CVF International Conference on Computer Vision (**ICCV**), Visual Inductive Prior Workshop, Paris, France, 2023, **[Jury Prize].**

[C5]   Chih-Chung Hsu, **Chia-Ming Lee**, Xiu-Yu Hou, Chi-Han Tsai, "Gradient Boost Tree Network based on Extensive Feature Analysis for Popularity Prediction of Social Posts", ACM International Conference on Multimedia (**ACMMM**), Ottawa, Canada, 2023, **[Top paper Award].**

[C6]   Chih-Chung Hsu, Wen-Hai Tseng, Ming-Husan Wu, **Chia-Ming Lee**, Wei-Hao Huang, "Adapting Object Detection to Fisheye Cameras: A Knowledge Distillation with Semi-Pseudo-Label Approach", ACM International Conference on Multimedia Asia (**MMAsia**), Tainan, Taiwan, 2023.

[C7]   Chih-Chung Hsu, **Chia-Ming Lee**, Chun-Hung Sun, Kuang-Ming Wu, "Progressive Alignment with VLM-LLM Feature to Augment Defect Classification for the ASE Dataset", Submitted to IEEE/CVF Computer Vision and Pattern Recognition Conference **(CVPR)**, Multimodal Learning and Applications (MULA) Workshop, Seattle, USA, 2024. [Under review]

[C8]   Chih-Chung Hsu, **Chia-Ming Lee**, Yang Fan Chiang, Chih-Yu Jiang, Shen-Chieh Tai, Chi-Han Tsai, "A Closer Look at Spatial-Slice Features for COVID-19 Detection", IEEE/CVF Computer Vision and Pattern Recognition Conference **(CVPR)**, Domain adaptation, Explainability, Fairness in AI for Medical Image Analysis (DEF-AI-MIA) Workshop, Seattle, USA, 2024.

[C9] Chih-Chung Hsu, **Chia-Ming Lee**, Yi-Shiuan Chou, "DRCT: Saving Image Super-Resolution away from Information Bottleneck", IEEE/CVF Computer Vision and Pattern Recognition Conference **(CVPR)**, New Trends in Image Restoration and Enhancement (NTIRE) Workshop, Seattle, USA, 2024.

[C10] Chih-Chung Hsu, Wei-Hao Huang, Wen-Hai Tseng, Ming-Husan Wu, Hsu Ren-Jung, **Chia-Ming Lee**, "General Data-Driven Approaches for Optimizing Object Detection in Fisheye-Camera Scenes", submitted to IEEE/CVF Computer Vision and Pattern Recognition Conference **(CVPR)**, AI City Challenge, Seattle, USA, 2024. [Under review]

[C11] Chih-Chung Hsu, Yu-Fan Lin, **Chia-Ming Lee**, Bo-Cheng Chiu, "Divide and Conquer: Grounding the Bleeding Areas with Two-Stage Model", IEEE International Conference on Image Processing **(ICIP)**, Abu Dhabi, UAE, 2024.

AWARDS AND SCHOLARSHIPS

[AS1] Zhang Wang Wei Foundation Scholarship, Fu Jen Catholic University, Sept. 2021~ Jun. 2023.

[AS2] **The Highest Prize (1/96)** , International Competition Scholarship, Fu Jen Catholic University, Jun. 2023.

[AS3] **Winner (1/18)**, COV19 Detection Challenge, AI-enabled Medical Image Analysis Workshop in IEEE International Conference on Acoustics, Speech, & Signal Processing (ICASSP), Jun. 2023.

[AS4] **Jury Prize (1/176)**, Visual Inductive Priors Workshop on Instance Segmentation Challenge, IEEE/CVF International Conference on Computer Vision (ICCV), Oct. 2023.

[AS5] **Top Paper Award (3/700+)** , Socia Media Prediction Challenge, ACM International Conference on Multimedia (ACMMM), Oct. 2023.

[AS6] **Gold Medal Award (1/150+)**, SAS Hackathon, Nov, 2023, [Reported by 6+ domsetic medias].

[AS7] **2nd place (2/129)**, Embedded AI Object Detection Model Design, PAIR-LITEON Competition, ACM International Conference on Multimedia Asia (MMAsia), Dec. 2023.

[AS8] **6nd place (6/195)**, SeaDroneSee Multi-Object Tracking and Re-Identification Challenge, IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), Jan. 2024.

[AS9] **(?/8) Ministry of Education Presidential Education Award Candidate in NCKU.**

[AS10] **2nd place (2/1200+)**, Auto-WCEBleedGen Challenge Version, IEEE International Conference on Image Processing (ICIP), Oct. 2024.

[AS11] **3rd place (3/21)**, COVID-19 Detection Challange, Domain adaptation, Explainability and Fairness in AI for Medical Image Analysis, IEEE Computer Vision & Pattern Recognition (CVPR), Jun, 2024.

[AS12] **6th place (6/199)**, NTIRE 2024 Image Super-Resolution (x4), IEEE Computer Vision & Pattern Recognition (CVPR), Jun, 2024.

[AS13] **9th place (9/288)**, AI City Challenge Track 4: Road Object Detection in Fish-Eye Cameras, IEEE Computer Vision & Pattern Recognition (CVPR), Jun, 2024.

ACADIMIC SERVICES

Conference Paper Reviewer   CVPR2024

PROJECTS

[P1]	A Large Scale Whitebait Dataset for Long-tailed Distribution Image Classification and Domain Adaptation, Fu Jen Catholic University. (Joint-project with Institute of Fisheries Science, National Taiwan University)	[Jun-2022 ~ Dec-2022]
[P2]	Substrate Drilling Scatter Plot Defect Detection, Corporate R&D, Advanced Semiconductor Engineering Group (ASE).	[Feb-2023 ~ Jan-2024]
[P3]	Cybersecurity in distributed computing for remote sensing, NVIDIA Taiwan Research.	[Apr-2024 ~ Present]

TEACHING EXPERIENCE

Institute of Data Science, National Cheng Kung University (NCKU)

[T1]	[112-Fall] Statistical Method For Analysis With Missing Data	Prof. Lukusa Martin
[T2]	[112-Fall] Programming Language	Prof. Chih-Chung Hsu
[T3]	[112-Spring] Deep Learning	Prof. Chih-Chung Hsu