

Chia-Hsiang (Aaron) Kao

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Education

Cornell University, Ithaca, NY, USA

2023 - Present

- Ph.D. Student in Computer Science
- Advisor: Professor [Bharath Hariharan](#) and [Kavita Bala](#)

National Yang-Ming Chiao-Tung University, Taipei, Taiwan

2015 - 2022

- Doctor of Medicine
- Advisor: Professor [Wei-Chen Chiu](#) and Doctor [Pin-Yu Chen](#)

Research Interest

Current Research

- *Scientific reasoning with code generation*
 - Developing a self-verifiable LLM for remote sensing question-answering with instruction tuning and consistency preference optimization. Advisor: Professor [Bharath Hariharan](#), [Kavita Bala](#), [Carl Vondrick](#)
- *Reasoning with multimodal LLM*
 - Enabling test-time few-shot learning with active visual reasoning. Advisor: Professor [Bharath Hariharan](#)

Previous Research

- Learning Algorithms: meta-learning^[2] and non-backpropagation learning^[6]
- Sequence Modeling: DNA^[3,4] and satellite video^[5]
- AI4Science: biology^[3,4], medical imaging^[1], and remote sensing^[5]

Publications

- [6] Counter-Current Learning: A Biologically Plausible Dual Network Approach for Deep Learning.
[Chia-Hsiang Kao](#), Bharath Hariharan
In NeurIPS 2024
- [5] AllClear: A Comprehensive Dataset and Benchmark for Cloud Removal in Satellite Imagery
[Chia-Hsiang Kao](#)*, Hangyu Zhou*, Cheng Perng Phoo, Utkarsh Mall, Bharath Hariharan, Kavita Bala
In NeurIPS Datasets and Benchmarks Track 2024
- [4] Caduceus: Bi-Directional Equivariant Long-Range DNA Sequence Modeling
Yair Schiff, [Chia-Hsiang Kao](#), Aaron Gokalsan, Tri Dao, Albert Gu, Volodymyr Kuleshov
In ICML 2024
- [3] Advancing DNA Language Models: The Genomics Long-Range Benchmark
[Chia-Hsiang Kao](#)*, Evan Trop*, McKinley Polen*, Yair Schiff*, Bernardo P. de Almeida, Aaron Gokalsan, Thomas Pierrot, Volodymyr Kuleshov
In AAAI (workshop) 2023
- [2] MAML Is a Noisy Contrastive Learner in the Classification
[Chia-Hsiang Kao](#), Wei-Chen Chiu, Pin-Yu Chen
In ICLR 2022
- [1] Demystifying T1-MRI to FDG18-PET Image Translation via Representational Similarity
[Chia-Hsiang Kao](#), Yong-Sheng Chen, Li-Fen Chen, Wei-Chen Chiu
In MICCAI 2021

Honors & Awards

- Student Travel Award, MICCAI 2021 2021
- Undergraduate Research Fellowship, National Science and Technology Council, Taiwan 2018, 2020
- Summer Research Fellowship, National Health Research Institutes 2018

Services

Conference Reviewer: NeurIPS'21, AutoML'22, NeurIPS'24, ICLR'25, AAAI'25, AISTAT'25

Journal Reviewer: CVIU (2022), Comput. Electr. Eng. (2024), IEEE TETCI (2024)