

Chia-Hsiang Kao

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Education

Cornell University

PH.D. STUDENT IN COMPUTER SCIENCE

Ithaca, NY, USA

Aug. 2023 - Jun. 2029 (expected)

National Yang-Ming Chiao-Tung University (NYCU)

DOCTOR OF MEDICINE

Taipei, Taiwan

Aug. 2015 - Jun. 2022

Publications

Meta-learning.

Kao, C. H., Chiu, W. C., & Chen, P. Y. (2021, September). MAML Is a Noisy Contrastive Learner in Classification. In International Conference on Learning Representations.

Explainable AI.

Huang, C. C., Low, I., Kao, C. H., Yu, C. Y., Su, T. P., Hsieh, J. C., ... & Chen, L. F. (2022, July). MEG-based Classification and Grad-CAM Visualization for Major Depressive and Bipolar Disorders with Semi-CNN. In 2022 44th Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC) (pp. 1823-1826). IEEE.

Kao, C. H., Chen, Y. S., Chen, L. F., & Chiu, W. C. (2021, September). Demystifying T1-MRI to FDG-PET Image Translation via Representational Similarity. In International Conference on Medical Image Computing and Computer-Assisted Intervention (pp. 402-412). Springer, Cham.

Kao, C. H., Yang, C. J., Cheng, L. K., Yu, H. Y., Chen, Y. S., Hsieh, J. C., & Chen, L. F. (2019, March). Unravelling the Spatio-Temporal Neurodynamics of Rhythm Encoding-reproduction Networks by a Novel fMRI Autoencoder. In 2019 9th International IEEE/EMBS Conference on Neural Engineering (NER) (pp. 615-618). IEEE.

Research Experience

MIT-IBM Watson AI Lab

RESEARCH STUDENT

Massachusetts, USA

Dec. 2020 - Aug. 2021, Jun. - Jul. 2022

- Advisor: Dr. Pin-Yu Chen; co-advisor: Dr. Wei-Chen Chiu
- Proved that MAML is a supervised contrastive learning algorithm. Studied theories of self-supervised learning and adversarial learning.

Brain Mapping Laboratory, NYCU

RESEARCH STUDENT

Taipei, Taiwan

Sep. 2017 - Sep. 2020

- Advisor: Dr. Li-Fen Chen
- Utilized explainable AI tools to understand the inner behavior of image translation models. Analyzed fMRI, MRI, and CT data and built various predictive models.

Institute of Information Science, Academia Sinica

RESEARCH STUDENT

Taipei, Taiwan

Jun. - Sep. 2017

- Advisor: Dr. Meng-Chang Chen
- Analyzed air quality data and built air pollution predictive models.

Clinical Experience

Taipei Veteran General Hospital

INTERN DOCTOR

Taipei, Taiwan

Oct. 2019 - Sep. 2020, Jan. - Jun. 2022

- Served as a two-year intern doctor in Internal Medicine, Surgery, ICU, Emergency Medicine, OB/GYN, etc. I was responsible for the primary care of the inpatient in those departments.

Chi Mei Medical Center

INTERN DOCTOR

Tainan, Taiwan

Nov. - Dec. 2021

- Served as an intern doctor in Internal Medicine and Emergency Medicine.

Scholarships & Awards

- 2021 **Student Travel Award**, MICCAI'21
- 2020 **College Student Research Scholarships**, National Science Council
- 2018 **College Student Research Scholarships**, National Science Council
- 2018 **Summer Research Scholarships**, National Health Research Institutes, Taiwan

Skills

- Language** Mandarin (Native), English (Fluent, TOEFL: 106/120)
- Program** Python (PyTorch, TensorFlow, Keras, OpenCV, Scikit-learn), MATLAB
- Interest** Swimming (I got lifeguard certification at 18), jogging (one half-marathon, two 10Ks, and five 8.9Ks so far), and writing.