Chia-Hsiang Kao

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Education

Cornell University *Ithaca, NY, USA*

Ph.D. Student in Computer Science *Aug. 2023 - Jun. 2029 (expected)*

National Yang-Ming Chiao-Tung University (NYCU) *Taipei, Taiwan*

Doctor of Medicine *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 *Massachusetts, USA*

Research Student *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 *Taipei, Taiwan*

Research Student *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 *Taipei, Taiwan*

Research Student *Jun. - Sep. 2017*

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

Clinical Experience

Taipei Veteran General Hospital *Taipei, Taiwan*

Intern Doctor *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 *Tainan, Taiwan*

Intern Doctor *Nov. - Dec. 2021*

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

Scholarships & Awards

2021 **Student Travel Award**, MICCAI
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

Services

2022 **Reviewer**, CVIU
2022 **Reviewer**, AutoML'22
2021 **Junior Reviewer**, Workshop on Meta-Learning, NeurIPS'21

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.