Ching-Hao Chiu

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Education

National Tsing Hua University (NTHU) **Sep. 2022 – Jun. 2024**
Master of Science in Computer Science *Hsinchu, Taiwan*

- GPA: 4.23/4.3

National Tsing Hua University (NTHU) **Sep. 2018 – Jun. 2022**
Bachelor of Science in Computer Science *Hsinchu, Taiwan*

- GPA: 3.94/4.3

Publications

Kong, Q. P., **Chiu, C. H.**, Zeng, D. W., Chen, Y. J., Ho, T. Y., Hu, J. T., Shi, Y. Y. (2024). **Achieving Fairness Through Channel Pruning for Dermatological Disease Diagnosis.** Accepted by **MICCAI 2024**(Link).

Chiu, C. H., Chen, Y. J., Wu, Y. W., Shi, Y. Y., Ho, T. Y. (2024). **Achieve Fairness without Demographics for Dermatological Disease Diagnosis.** Accepted by **Medical Image Analysis(Link).**

Chung, H. W., **Chiu, C. H.**, Chen, Y. J., Shi, Y. Y., Ho, T. Y. (2023). **Toward Fairness via Maximum Mean Discrepancy Regularization on Logits Space.** Accepted by **DAC 2024 Work-in-Progress (WIP) poster sessions(Link).**

Chiu, C. H., Chung, H. W., Chen, Y. J., Shi, Y. Y., Ho, T. Y. (2023). **Toward Fairness Through Fair Multi-Exit Framework for Dermatological Disease Diagnosis.** Accepted by **MICCAI 2023(Link).**

Chiu, C. H., Chung, H. W., Chen, Y. J., Shi, Y. Y., Ho, T. Y. (2023). **Fair Multi-Exit Framework for Facial Attribute Classification.** Accepted by **AAAI 2023 Workshop on AI for Social Good(Link).**

Chen, Y. J., Shen, W. H., Chung, H. W., **Chiu, C. H.**, Juan, D. C., Ho, T. Y., ... & Ho, T. Y. (2022). **Representative Image Feature Extraction via Contrastive Learning Pretraining for Chest X-ray Report Generation(Link).**

Research Experience

Master Student at THETA Lab, NTHU **June. 2022 – Jun. 2024**
Advisors: Tsung-Yi Ho (NTHU), Yiyu Shi (University of Notre Dame) *Hsinchu, Taiwan*

- Research Topic: Fairness in machine learning.
  - Proposed a logits space regularization method and successfully achieved prediction fairness across various demographic groups in the facial attributes datasets.
- Research Topic: Fairness in machine learning.
  - Proposed a multi-exit training framework to mitigate prediction bias across different demographic groups in dermatological diseases and facial attributes datasets.

Visiting Researcher at NDSCL Lab, University of Notre Dame **Sep. 2023 – Oct. 2023**
Advisors: Yiyu Shi (University of Notre Dame) *IN, USA*

- Research Topic: Fairness in machine learning for healthcare.
  - Proposed a fairness through unawareness method to mitigate prediction bias across different demographic groups in ISIC2019 & Fitzpatrick-17k datasets.

Undergraduate Researcher at THETA Lab, NTHU **June. 2021 – Jan. 2022**
Advisors: Tsung-Yi Ho (NTHU), Da-Cheng Juan (Google Research) *Hsinchu, Taiwan*

- Research Topic: Self-supervised learning in medical images.
  - Improved medical image report generation through self-supervised contrastive learning.
  - Proposed novel augmentation for generating positive and negative pairs in contrastive learning.

Teaching Experience

Teaching Assistant of Probability, NTHU **Feb. 2021 – Jul. 2021**
Lecturer: Jung-Chun Kao *Hsinchu, Taiwan*

- Assisted Professor Kao, graded exams, and assigned homework.

Skills

Programming Language : Python, C/C++, HTML/CSS, JavaScript, Verilog

Software/Framework: Linux, Visual Studio

Machine Learning: Pytorch, Tensorflow, Numpy, OpenCV, Sklearn

Languages: Mandarin (native), English(TOEFL 100/120)