Chan Hsu

Kaohsiung, Taiwan
Email: chanshsu@gmail.com / TEL: +886 910699550
Website: https://chanshsu.github.io

Updated on 2024/08/07

I am a doctoral student specializing in machine learning (ML), with particular emphasis on causality and interpretability. I also focus on applying ML to help make decisions in high-stakes domains like healthcare. I aim to pursue a Ph.D. to further innovate in machine learning and improve solutions to practical challenges in healthcare and other domains.

Education

National Sun Yat-sen University — *Kaohsiung, Taiwan*
Ph.D. student — *Sep 2022 - Now*
Advisor: Prof. Yihuang Kang
Research Interest: Statistical Machine Learning, Interpretability, Causality

National Sun Yat-sen University — *Kaohsiung, Taiwan*
M.S. in Information Systems — *Sep 2020 - Aug 2022*
Advisor: Prof. Yihuang Kang
Thesis: Interpretable Representation Learning with Model-based Deep Rule Forest

National Sun Yat-sen University — *Kaohsiung, Taiwan*
B.B.A. in Information Management — *Sep 2016 - Jun 2020*

Publications

Total Citations: 11

Journal Articles

J1. Shih-Yi Chien, Shiau-Fang Chao, Yihuang Kang, **Chan Hsu**, Meng-Hsuan Yu, Chan-Tung Ku. (2022). Understanding Predictive Factors of Dementia for Older Adults: A Machine Learning Approach for Modeling Dementia Influencers. International Journal of Human-Computer Studies (IJHCS).

Conference Proceedings

C1. Chih-Yuan Li, Jun-Ting Wu, **Chan Hsu**, Ming-Yen Lin, Yihuang Kang. (2024). Understanding eGFR Trajectories and Kidney Function Decline via Large Multimodal Models. Accepted by International Workshop on Big Data in Healthcare (BDH, in conjunction with IEEE MIPR).

C2. **Chan Hsu**, Jun-Ting Wu, Yihuang Kang. (2024). Causal Rule Forest: Toward Interpretable and Precise Treatment Effect Estimation. Accepted by IEEE IRI 2024.

C3. I-Ling Cheng, **Chan Hsu**, Pei-Ju Lee, Chan-Tung Ku, Yihuang Kang. (2024). Subgroup analysis via Model-based Rule Forest. Accepted by IEEE Workshop on AI for Healthcare (AIHC, in conjunction with IEEE IRI).

C4. Hei-Liam Chow, **Chan Hsu**, Shih-Yi Chien. (2024). Psychosocial Determinants of Dementia Progression: Insights from Advanced Data Analytics using the Taiwan Longitudinal Study in Aging. In IEEE International Conference on Human-Machine Systems (ICHMS).

C5. **Chan Hsu**, Wei-Chun Huang, Jun-Ting Wu, Chih-Yuan Li, Yihuang Kang. (2023). Toward Transparent Sequence Models with Model-Based Tree Markov Model. In IEEE International Conference on Multimedia Information Processing and Retrieval (MIPR), Big Data in Healthcare workshop.

C6. **Chan Hsu**, Chan-Tung Ku, Yuwen Wang, Minchen Hsieh, Jun-Ting Wu, Yunhsiang Hsieh, PoFeng Chang, Yimin Lu, Yihuang Kang. (2023). A Teacher-Student Knowledge Distillation Framework for Enhanced Detection of Anomalous User Activity. In IEEE International Conference on Information Reuse and Integration for Data Science (IRI).

C7. **Chan Hsu**, Ching-Chih Tsao, Yu-Liang Weng, Cheng-Yi Tang, Yu-Wen Chang, Yihuang Kang, Shih-Yi Chien. (2022). A machine learning approach to model HRI research trends in 2010~ 2021. In ACM/IEEE International Conference on Human-Robot Interaction (HRI).

Internships

University Library Systems, University of Pittsburgh *Pittsburgh, United States*
Visiting Student, East Asian Library *Aug 2024*
Supervised by Runxiao Zhu
Large Language Models in digital archiving.

Experience

Kaohsiung Medical University *Kaohsiung, Taiwan*
Research Assistant *Jun 2021 - Jul 2025*
Supervised by Prof. Yi-Wen Chiu, Prof. Ming-Yen Lin, and Prof. Yi-Ting Lin
Personalized treatment recommendation, ML for CKD caring, multi-omics data analysis.

National Sun Yat-sen University *Kaohsiung, Taiwan*
Research Assistant *Mar 2020 - Jul 2023*
Supervised by Prof. Yihuang Kang.
MLOps platform based on Kubernetes, ML models for detecting anomalous account activity.

National Chengchi University *Taipei, Taiwan*
Research Assistant *Jun 2021 - Nov 2021*
Supervised by Prof. Shih-Yi Chien.
Topic modeling on HRI literature.

Services

Teaching Assistant at NSYSU. (2021 Fall, 2022 Fall): MIS572 Introduction to Big Data Analytics
Teaching Assistant at NSYSU. (2021 Spring, 2022 Spring): MIS102 Computer Programming
Teaching Assistant at NSYSU. (2021 Spring): MIS985 Practical Business Analytics
Statistical Consultant at College of Management, NSYSU. (Aug 2022 - Now).
Reviewers: IEEE IRI (2023, 2024), IEEE MIPR (2024), VAMR (2023).

Awards and Honors

Travel Grant *Jul 2024*
National Science and Technology Council (NSTC), Taiwan. COMPETITIVE.
Granted to present at IRI 2024.

Elite Doctoral Student Scholarship *2022 - 2025*
Co-funded by NSYSU and NSTC, Taiwan

Liang Ting-Peng National Chair Professor Memorial Scholarship 2022 - 2023
Department of Information Management, NSYSU.

References

Available on request