Hui Wei

EDUCATION

Electrical Engineering and Computer Science, University of California, Merced	2025 - Present
Ph.D. student in Computer Science	GPA: 4.0/4.0
Courant Institute of Mathematical Sciences, New York University	2017 - 2019
M.S. in Computer Science	GPA: 3.8/4.0
Beijing University of Posts and Telecommunications	2013 - 2017
B.Eng. in Telecommunication Engineering	GPA: 3.8/4.0

RESEARCH INTERESTS

Machine Learning, Natural Language Processing, Internet-of-Things, Cyber Physical Systems

RESEARCH EXPERIENCE

Research Scientist Intern

05/2024 - 08/2024

PAII.Inc (Ping An Technology North America Research Institute, Sillicon Valley)

Palo Alto, CA

- $\bullet \ \ \text{Worked on systematic evaluation on } \textbf{LLM-as-a-Judge} \ \ \text{methodology with summarization and conversation } \ \text{tasks}.$
- $\bullet \ \ \text{Worked on improving } \textbf{proximal policy optimization} \ \ \text{algorithms for better LLM alignment with human preferences}.$
- One paper [1] was submitted to AAAI 2025 (AI Alignment Track) and one paper [2] was submitted to NAACL 2025.

Research Assistant

09/2022 - 01/2024

UMass Amherst

Amherst, MA

- Worked on a **temporally sparse self-attention model** to address the **missing data problem** in large-scale longitudinal physical activity data from the *All of Us* research program.
- Worked on a variational auto-encoder model for irregularly sampled ICU data with various output distributions.
- Worked on a reconstruction-based **contrastive learning** approach to improve the quality of time series encodings.
- One paper [3] was accepted by CHIL 2024 and ICLR workshop on Learning from Time Series for Health 2024.
- One paper [4] was accepted by ICLR 2024.

Research Assistant

02/2019 - 06/2020

NYU Grossman School of Medicine

New

New York City, NY

- Worked on evaluation of diagnostic accuracy and fairness for Alzheimer's disease and Lewy body disease.
- Worked on CNN, LSTM and Transformer-based models for disease onset prediction using NYU EHR data.
- One paper [5] was accepted by the journal Frontiers in Aging Neuroscience 2023.

PUBLICATIONS

- * indicates equal contribution
 - 1. **Hui Wei***, Shenghua He*, Tian Xia, Andy Wong, Jingyang Lin, Mei Han. "Systematic Evaluation of LLM-as-a-Judge in LLM Alignment Tasks: Explainable Metrics and Diverse Prompt Templates." *arXiv* preprint arXiv:2408.02373 (2024). (Under review of **AAAI** 2025 AI Alignment Track).
 - 2. Jingyang Lin*, Andy Wong*, Tian Xia, Shenghua He, **Hui Wei**, Mei Han, Jiebo Luo. "Facilitating Long Context Understanding via Agentic Behavioral Cloning." (Under review of **NAACL** 2025).
 - 3. **Hui Wei**, Maxwell A. Xu, Colin Samplawski, James M. Rehg, Santosh Kumar, Benjamin M. Marlin. "Temporally Multi-Scale Sparse Self-Attention for Physical Activity Data Imputation." *Conference on Health, Inference, and Learning* (CHIL). PMLR, 2024.
 - Maxwell A. Xu, Alexander Moreno, Hui Wei, Benjamin M. Marlin, James M. Rehg. "Retrieval-Based Reconstruction for Time-series Contrastive Learning." 12th International Conference on Learning Representations (ICLR), 2024.
 - 5. **Hui Wei**, Arjun V. Masurkar, and Narges Razavian. "On Gaps of Clinical Diagnosis of Dementia Subtypes: A Study of Alzheimer's Disease and Lewy Body Disease." *Frontiers in Aging Neuroscience* 15 (2023): 1149036.

TEACHING EXPERIENCE

Head Teaching Assistant, UMass Amherst

09/2024 - 12/2024

COMPSCI 485: Introduction to Natural Language Processing

Amherst, MA

- Advised student teams on final project ideas and provided extra weekly office hours for additional support.
- Managed grading for homework, exams, and in-class exercises, and handled online student questions.

Teaching Assistant, UMass Amherst

01/2024 - 05/2024

COMPSCI 250: Introduction to Computation

Amherst, MA

• Led weekly discussion and lab sessions, held regular office hours to support students, and graded assignments.

AWARDS AND HONORS

Student Spotlight, Neuroscience at UMass Amherst, 2023.

Merit Student Scholarship, Beijing University of Posts and Telecommunications, 2013-2017.

ACADEMIC SERVICES

Reviewer, workshop on Learning from Time Series for Health at ICLR 2024 and NeurIPS 2022.

Reviewer, IEEE Journal of Biomedical and Health Informatics (JBHI) 2024.

Evaluation committee, workshop on DATA at Sensys & Buildsys 2024, 2023, 2022.

TECHNICAL SKILLS

Languages: Python, C/C++, Bash, LATEX, Markdown, SQL, HTML/CSS Libraries: PyTorch, NumPy, Matplotlib, Pandas, Scikit-Learn, Seaborn, SciPy

Tools: Linux, Git/GitHub