

Jianhong Tu

tovitusaikou@gmail.com | 314-728-7557 | jianhongtu.github.io | linkedin.com/in/jianhong-tu

Research Interests: Foundation Models †Post-Training †Agentic AI †Cybersecurity

Education

University of California, Santa Cruz, PhD in Computer Science	Sept 2025 – Present
• Advisor: Chenguang Wang	
Washington University in St. Louis, PhD in Computer Science	Jan 2025 – Jul 2025
• Advisor: Chenguang Wang	
Washington University in St. Louis, BS in Data Science	Sept 2021 – Dec 2024
• GPA: 4.0/4.0	

Publications

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- [1] **Jianhong Tu**, Zhuohao Ni, Nicholas Crispino, Zihao Yu, Michael Bendersky, Beliz Gunel, Ruoxi Jia, Xin Liu, Lingjuan Lyu, Dawn Song, and Chenguang Wang. 2025. MLAN: Language-Based Instruction Tuning Preserves and Transfers Knowledge in Multimodal Language Models. In *Proceedings of the 3rd Workshop on Towards Knowledgeable Foundation Models (KnowFM at ACL 2025)*.
 - [2] Kyle Montgomery, David Park, **Jianhong Tu**, Michael Bendersky, Beliz Gunel, Dawn Song, and Chenguang Wang. 2025. Predicting Task Performance with Context-aware Scaling Laws. In *Proceedings of the 3rd Workshop on Towards Knowledgeable Foundation Models (KnowFM at ACL 2025)*.
 - [3] Ye Yuan, Junyu Luo, Guancheng Wan, Jinsheng Huang, Chengwu Liu, Junwei Yang, Yifang Qin, Zhiping Xiao, Qingqing Long, Meng Xiao, Yiqiao Jin, **Jianhong Tu**, Yuqi Chen, Wei Ju, Zhongwei Wan, Yusheng Zhao, Xiao Luo, Yiwei Fu, Yizhou Sun, Wei Wang, Chenguang Wang, and Ming Zhang. 2025. A Comprehensive Survey of Evaluating Multimodal Foundation Models: Hierarchical Perspective and Extensive Applications. *Preprint*, May 2025.
 - [4] **Jianhong Tu** and Anxu Wang. 2024. Diversity-based Data Subset Selection with Deep Reinforcement Learning. *Preprint*, December 2024.
 - [5] **Jianhong Tu**, Erdong Chen, and Shuhan Zhang. 2024. Instruction-aware Visual Feature Extraction for Multimodal Large Language Model. *Preprint*, December 2024.
 - [6] James N. McGregor, Clayton A. Farris, Sahara Ensley, Aidan Schneider, Leandro J. Fosque, Chao Wang, Elizabeth I. Tilden, Yuqi Liu, **Jianhong Tu**, Halla Elmore, Keenan D. Ronayne, Ralf Wessel, Eva L. Dyer, Kiran Bhaskaran-Nair, David M. Holtzman, and Keith B. Hengen. 2024. **Failure in a population: Tauopathy disrupts homeostatic set-points in emergent dynamics despite stability in the constituent neurons.** *Neuron*, Aug 2024. (COVER PAPER)

Experience

Research Assistant , Hengen Lab – Washington University in St. Louis	May 2022 – Dec 2024
<i>Advisors: Keith Hengen and Aidan Schneider</i>	
• Built a transformer-based seq2seq action recognition model improving accuracy over ensemble XGBoost. • Built and trained neural decoding models that infer light–dark cycles from large-scale mouse neural recordings to identify environment-responsive neural patterns.	
Research Fellow , BioSURF – Washington University in St. Louis	May 2023 – Sept 2023
<i>Advisor: James N. McGregor</i>	
• Proposed a novel CNN-Transformer model achieving over 95% accuracy in mouse sleep-wake analysis. • Conducted statistical analysis on the relationship between sleep deficiency and tauopathy.	

Open-Source Projects

Contributor, AgentBeats – a platform for standardized agent evaluation.

Repository: <https://github.com/agentbeats/agentbeats>

- Contributed to the visualization panel for agent trace observability.
- Designed a snapshot management system for agent A/B testing.

Teaching Experience

Peer Research Mentor , Research Experience for Undergraduates Program – WashU	June 2024 – Dec 2024
Teaching Assistant , CSE 527: Natural Language Processing – WashU	Jan 2024 – May 2024
Teaching Assistant , CSE 561: Large Language Models – WashU	Jan 2024 – May 2024
Teaching Assistant , CSE 131: Introduction to Computer Science – WashU	Sept 2021 – May 2022

Awards and Honors

Dean's Select PhD Fellowship – WashU	2025
Summa Cum Laude – WashU	2024
Senior Excellence Award – WashU	2024
Antoinette Frances Dames Award – WashU	2022 – 2024
Biology Summer Undergraduate Research Fellowship – WashU	2022
Dean's List – WashU	2021 – 2024