

Jun Hou

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Education

Virginia Tech , Blacksburg, VA Ph.D. Candidate in Computer Science Advisor: Dr. Xuan Wang	Sep 2024 – Present
Northeastern University , Seattle, WA M.S. in Data Analytics Engineering	Sep 2021 – May 2023
Columbia University , New York, NY M.S. in Actuarial Science	Sep 2019 – Dec 2020
Rutgers University , New Brunswick, NJ B.A., Major: Mathematics; Minor: Statistics, Economics	Sep 2015 – May 2019

Research Interests

LLM agents & tool use; Multimodal modeling; Causal Inference; Trustworthy AI; Explainable AI

Publications

- Jun Hou, Priya Pitre, Yi Fang, Xuan Wang. EDGE: Error Dependency Graph-Guided Multi-Error Attribution in Multi-Agent LLM Systems. EMNLP 2026.
- Jun Hou, Yi Fang, Xuan Wang. Role-Specialized Mixture-of-Agents with Open-Weight LLMS for Clinical Prediction. COLM 2026 DAIH Workshop.
- Jun Hou, Le Wang, Xuan Wang. *BTW: A Non-Parametric Variance Stabilization Framework for Multimodal Model Integration*. EMNLP 2025.
- Jun Hou, Lucy Lu Wang. *Explainable AI for Clinical Outcome Prediction: A Survey of Clinician Perceptions and Preferences*. AMIA 2025 Informatics Summit.

Professional Experience

Graduate Research Assistant , Virginia Tech, Blacksburg, VA	Sep 2024 – Present
• Building personalized LLM agents for healthcare to improve personalization accuracy and clinical relevance. • Applying causal inference methodologies to AI-driven disaster forecasting models to improve prediction reliability and interpretability. • Investigating human-AI coupling errors to identify and mitigate systemic failure points in collaborative AI environments.	
Teaching Assistant , Northeastern University, Seattle, WA	Sep 2023 – Dec 2023
• Course: IE7500 Applied Natural Language Processing.	
Insurance Linked Security Co-Op , Amundi US, Boston, MA	Jul 2022 – Dec 2022
• Created an interactive RShiny dashboard to enable user-friendly and automated SQL database.	
Research Assistant , Columbia University, New York, NY	May 2020 – Dec 2020
• Analyzed and predicted mortality data trends using queries from the Snowflake database. • Developed a determination model for mortality improvement trends with smoothing and interpolation.	

Research Projects

Survey for Validation of Explainable AI (XAI) in Clinical NLP	Jun 2023 – Mar 2024
Advisor: Dr. Lucy Lu Wang	
• Conducted a comprehensive review of XAI methods used in clinical NLP and designed a questionnaire for clinical practitioners. • Implemented XAI techniques, including Local Interpretable Model-Agnostic Explanations and self-attention visualization. Utilized few-shot in-context learning with the GPT API to generate free-text rationales.	

Technical Skills

Python; PyTorch; SQL; R; Data analysis toolkits; Java