School of Computing
UNIVERSITY OF GEORGIA

Institute for Artificial Intelligence
UNIVERSITY OF GEORGIA

Faculty Candidate Seminar

February 25, 2026
10:00 – 11:15 am – Room: Conner Hall 202

Towards Trustworthy Natural Language Processing for Sciences

Dr. Xiaolei Huang
Assistant Professor – University of Memphis

Abstract:
Natural Language Processing (NLP) has significantly enhanced decision-making systems in various fields, particularly in healthcare and agriculture. Despite its advancements, challenges such as robustness and algorithmic bias hinder its trustworthiness. This talk will start with Dr. Huang's AI curriculum design and plans that can strengthen the AI institute's degree program, advance research-education integration, and enable cross-disciplinary workforce development. Dr. Huang will present his recent research work from the unique data perspective to promote NLP trustworthiness across diverse scientific applications. The talk will cover three major research thrusts, including data quality, data shifts, and data availability. Finally, the talk will present strong potentials of NLP for diverse scientific disciplines, NLP4Sciences, through the emerging needs in large language models (LLMs). His research mainly supported by NSF, enable safer and more reliable AI methods across healthcare, agriculture, and engineering.

Biography:
Dr. Xiaolei Huang is an Assistant Professor of Computer Science and serves as co-director of the Center for Emerging Technologies in AI at the University of Memphis. He received his Ph.D. from the University of Colorado Boulder and has since developed a leading research program in Trustworthy NLP, with applications spanning health and agriculture. His work addresses fundamental challenges in data imbalance, temporal drift, and causal robustness. Dr. Huang has secured multi-million federal and industry support, such as the NSF CAREER and CRII. His publication includes top conferences and journals, where he received the Best Paper Award in 2024. The research has resulted in strong community connections in Southern US.