RIT
Center for Human-aware Artificial Intelligence

CHAI

CHAI Seminar Series

Refreshments will be served.

DATE: **Monday, April 10, 2023, 12:00-1:00 PM**

SPEAKER: **Dr. Jinjun Xiong,** SUNY Empire Innovation Professor, Department of Computer Science and Engineering, University at Buffalo

TITLE: **The human-side of AI: Envision how AI can help children with speech and language service needs**

IN PERSON: **Golisano Hall, Room 2400**

ABSTRACT: Nearly 3.4 million children in the U.S. require speech and language services under the Individuals with Disabilities Education Act (IDEA) and are at risk of falling behind in their academic and social-emotional development without timely intervention by Speech and Language Pathologists (SLPs). Unfortunately, there is a significant shortage of SLPs and the COVID pandemic has further exacerbated this gap, making it almost impossible for SLPs to provide individualized services for children. Through the recently established NSF National AI Institute for Exceptional Education, we envision a transformative approach to address this challenge. We aim to develop advanced AI technologies to scale SLPs' availability and services so no child in need of speech and language services is left behind. We propose to develop two novel AI solutions: (1) AI Screener for universal early screening, and (2) AI Orchestrator to work with SLPs and teachers to provide individualized interventions for children with their formal Individualized Educational Plan. We will advance foundational AI technologies, enhance our understanding of children's speech and language development, serve as a nexus point for all special education stakeholders, and represent a fundamental paradigm shift in how SLPs serve children in need of ability-based speech and language services. We will discuss the rationale behind the Institute's vision, the technical approaches, and corresponding research challenges. Our goal is to invite research communities to join our efforts to connect AI to solve societally impactful problems.

BIO: **Dr. Jinjun Xiong** is currently Empire Innovation Professor with the Department of Computer Science and Engineering at University at Buffalo (UB). He also serves as the Scientific Director and Co-Director for the NSF National AI Institute for Exceptional Education, and Co-Director for the SUNY-UB Institute for Artificial Intelligence and Data Science. Prior to that, he was a Senior Researcher and Program Director for AI and Hybrid Clouds Systems at the IBM Thomas J. Watson Research Center. He co-founded and co-directed the IBM-Illinois Center for Cognitive Computing Systems Research. His research interests are on across-stack AI systems research. He published more than 150 peer-reviewed papers in top AI conferences and systems conferences, won 8 Best Paper Awards and 8 Nominations for Best Paper Awards and won top awards from international competitions, including recent champion for the IEEE GraphChallenge on accelerating sparse neural networks and champion for Systems Design Contest at DAC'19 for an object detection neural network for edge FPGA and GPU devices.