北京大学前沿计算研究中心
Center on Frontiers of Computing Studies, Peking University

静园5号院
青 年 讲 座

Understanding Aging at Multi-scale Using Explainable AI

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Abstract

This talk explores the integration of Artificial Intelligence (AI) and Explainable AI (XAI) to elucidate aging mechanisms, aiming to extend healthspan and lifespan. I will present the ENABL Age framework, which provides precise, interpretable assessments of biological aging, and discuss DeepProfile and ACE for analyzing omics data, focusing on cancer and isolating aging-related signals. Additionally, I will cover our efforts in automating plain language generation to improve public health literacy. In conclusion, I advocate for a multidisciplinary approach in aging research, emphasizing collaboration across biology, AI, and public health to innovate and enhance healthcare accessibility.

Biography

Wei Qiu is a Assistant Professor in the Department of Electrical and Computer Engineering at Rice University. She received her Ph.D. from the University of Washington under the supervision of Su-In Lee. Her research lies at the intersection of explainable AI and computational biology, with a particular focus on aging. She develops interpretable AI models that provide transparent health insights and enable biological discovery across population health and genomic analyses. Her work has been published in journals such as Nature Biomedical Engineering and presented at conferences including ICML.