

Academic Seminar

Revolutionizing Healthcare with Federated Reinforcement Learning: From Machine Learning to Machine Unlearning

With the rise of artificial intelligence (AI) and machine learning (ML), healthcare is experiencing significant transformation, especially in patient monitoring systems that offer real-time health data. This talk reports our recent study on AI's role in these systems, highlighting advancements in federated learning, reinforcement learning, and the novel area of machine unlearning across settings like remote patient monitoring and mental health facilities. Findings underscore the power of AI in early anomaly detection and the innovative FedStack architecture's ability to provide individual insights. As the research tackles machine unlearning for data privacy, it acknowledges challenges in data scale and explainability, suggesting areas for future exploration. Overall, this presentation showcases AI's potential to reshape healthcare, emphasizing its future prominence in patient care enhancement.



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Dr. Xiaohui Tao is a Full Professor at the School of Mathematics, Physics and Computing, University of Southern Queensland in Australia. His research encompasses a wide spectrum, including data analytics, machine learning, natural language processing, and health informatics. His academic contributions are well-recognized with over 170+ publications in eminent journals such as TKDE, INFFUS, IPM and notable conferences including AAI, IJCAI, ICDE, and CIKM. Dr. Tao's academic contributions have been acknowledged with prestigious awards like the Australia Research Council Grant and the Australian Endeavour Research Fellow. As a Senior Member of both the IEEE and ACM, Dr. Tao also contributes as the Vice Chair of the IEEE Technical Committee on Intelligent Informatics (TCII). Dr. Tao concluded his PhD from the Queensland University of Technology, Australia, in 2009.

Date: 16 October 2023 (Monday)

Time: 10:30am – 11:30am

Venue: SEK 210, 2/F, Simon & Eleanor Kwok Building

Language: English



**** ALL ARE WELCOME ****