UT DALLAS THE UNIVERSITY OF TEXAS AT DALLAS | Department of COMPUTER SCIENCE

SPRING 2023

GRACE SERIES

Grace Series Talks are Women Empowerment Talks for Grad and Undergrad Students

FEATURING

Dr. Ling Liu

School of Computer Science, Georgia Institute of Technology

Ensemble Learning for Dirty Data

ABSRACT

Neural network ensemble is a collaborative learning paradigm that utilizes multiple neural networks to solve a complex learning problem. Constructing predictive models with high generalization performance is an important and yet most challenging goal for robust intelligence systems in the presence of dirty data. Given a target learning task, popular approaches have been dedicated to find the top performing model. However, it is difficult in general to estimate the best model when available data is finite, possibly dirty, and insufficient for the problem. In this talk, I will give an overview of a diversity-centric ensemble learning framework developed at Georgia Tech, including methodologies and algorithms for measuring, enforcing, and combining multiple neural networks by improving generalization performance of the overall system and maximizing ensemble utility and resilience to dirty data. I will also discuss experiences and lessons learned throughout my academic journey and the importance of open-ended learning, lifelong learning, and learning from interactions with diverse scholars.

BIOGRAPHY

Ling Liu is a Professor in the School of Computer Science at Georgia Institute of Technology. She directs the research programs in the Distributed Data Intensive Systems Lab (DiSL), examining various aspects of big data powered artificial intelligence (AI) systems, and machine learning (ML) algorithms and analytics, including performance, availability, privacy, security and trust. Prof. Liu is an elected IEEE Fellow, a recipient of IEEE Computer Society Technical Achievement Award (2012), and a recipient of the best paper award from numerous top venues, including IEEE ICDCS, WWW, ACM/IEEE CCGrid, IEEE Cloud, IEEE ICWS. Prof. Liu served on editorial board of over a dozen international journals and served as the editor in chief of IEEE Transactions on Service Computing (2013-2016), and currently is the editor in chief of ACM Transactions on Internet Computing (since 2019). Prof. Liu is a frequent keynote speaker in top-tier venues in Big Data, AI and ML systems and applications, Cloud Computing, Services Computing, Privacy, Security and Trust. Her current research is primarily supported by USA National Science Foundation under CISE programs, IBM and CISCO.

DATE: Tuesday January 31, 2023

TIME: 7p - 8p

LOCATION: Virtual on MS Teams

Contact: Drs . Mazidi , Thuraisingham, Nouroz Borazjany , Karami, and Chida