

Scalable Network Analysis

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Abstract

Unstructured data is being generated at a tremendous rate in modern applications as diverse as social networks, recommender systems, genomics, health care and energy management. Networks are an important example of unstructured data and may arise explicitly, as in social networks, or implicitly, as in recommender systems. These networks are challenging to handle; not only are they large-scale but they are constantly evolving, and many applications require difficult prediction tasks to be solved, such as link or ratings prediction. In this talk, I will discuss scalable solutions for a class of prediction tasks on large-scale networks, that involve algorithmic innovation in response to the demands of modern computer systems.

Biography

Inderjit Dhillon is a Professor of Computer Science and Mathematics at UT Austin, where he is the Director of the Center for Big Data Analytics. His main research interests are in big data, machine learning, network analysis, linear algebra and optimization. Inderjit received his B.Tech. degree from IIT Bombay, and Ph.D. from UC Berkeley. His dissertation work at Berkeley led to the fastest numerically stable algorithm for the symmetric tridiagonal eigenvalue problem, which has been adapted in all state-of-the-art numerical software libraries. Inderjit has received several prestigious awards, including the NSF Career Award in 2001, the University Research Excellence Award in 2005, the SIAM Linear Algebra Prize in 2006, the Moncrief Grand Challenge Award in 2010, the SIAM Outstanding Paper Prize in 2011, and the ICES Distinguished Research Award in 2013. Along with his students, he has received several best paper awards at leading data mining and machine learning conferences. Inderjit has published over 100 journal and conference papers, and has served on the Editorial Board of the Journal of Machine Learning Research, the IEEE Transactions of Pattern Analysis and Machine Intelligence, Foundations and Trends in Machine Learning and the SIAM Journal for Matrix Analysis and Applications. He is an IEEE Senior Member, and an ACM, SIAM and AAAS member.