中央研究院 資訊科學研究所
Institute of Information Science, Academia Sinica

Distinguished Lecture Series

Mining Heterogeneous Information Networks

Wednesday, July 20th, 2011 10:00am
Auditorium 106 at New IIS Building

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Abstract

Objects in the real world are interconnected, often forming complex heterogeneous but structured or semi-structured information networks. Different from some studies on social network analysis where friendship networks or web page networks form homogeneous information networks, heterogeneous information network reflect complex and structured relationships among multiple typed objects. For example, in a university network, objects of multiple types, such as students, professors, courses, departments, and multiple typed relationships, such as teach and advise are intertwined together, providing rich information.

We explore methodologies on mining such structured information networks and introduce several interesting new mining methodologies, including integrated ranking and clustering, classification, role discovery, data integration, data validation, and similarity search. We show that structured information networks are informative, and link analysis on such networks becomes powerful at uncovering critical knowledge hidden in large networks. The tutorial also presents a few promising research directions on mining heterogeneous information networks.

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