

Mining Graphs and Networks: A 15-Year Journey

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Abstract

As graph and network mining being a hot topic nowadays, in this talk, I will present a brief review of the 15 years research in my group on this topic. I will talk about how we started from building graph databases and graph indexes in 2004, and discuss the topics we researched including graph construction, graph databases, specialized graph databases (e.g., geographical networks and social networks), graph query answering, pattern mining in graphs, information flow and influence analysis on graphs, privacy preservation in social networks, machine learning on graphs from conventional classification and clustering to network embedding. From this relatively short and biased memoir, I will try to summarize and share some experience and lessons on mining big data.

Biography:

Always eager to meet new challenges and opportunities, Jian Pei is currently a Canada Research Chair (Tier 1) in Big Data Science, a Professor in the School of Computing Science at Simon Fraser University, and an associate member of the Department of Statistics and Actuarial Science. Recognized as an ACM Fellow and an IEEE Fellow, he is a pioneering researcher in data science, big data, data mining, and database systems. He is also renowned for his active and productive professional leadership. He has over 200 technical publications, which have been cited by 75000+ times, 38000+ in the last 5 years. His research has generated remarkable impact substantially beyond academia, such as his algorithms being adopted by industry in production, by open source software suites in vogue likes Spark MLlib and WEKA, and by classical data mining textbooks. He is the recipient of the ACM SIGKDD 2017 Innovation Award and the IEEE ICDM 2014 Research Contributions Award, the highest awards for technical excellence in data science and data mining, and the ACM SIGKDD 2015 Service Award. He is the ACM SIGKDD Chair.