A Tutorial on Social Network Analysis for Database Practitioners

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The purpose of this tutorial is to discuss social network analysis, focusing on two main themes: the mathematical foundations and their corresponding computational aspects; and the gathering of social data and discovery of the networks. The tutorial is illustrated through ReaSoN, a system for the analysis of research networks in Computing Science under development at the University of Alberta. ReaSoN comprises of several networks between researchers and organizations, extracted automatically from bibliographic databases. The processes of gathering and cleaning the data are presented in detail. Alternative ways of comparing the visibility of nodes in the network are also discussed. The tutorial also covers the various visualizations used in ReaSoN and other prominent systems. The tutorial also covers open problems, focusing on those relevant to database researchers and practitioners.

This tutorial will survey the most promising approaches to aspect-oriented modeling and will therefore give attendees an ideal introduction into the world of aspect-oriented modeling. Rather than trying to cover all approaches, the tutorial will present representative examples of the major ideas that have influenced the field. The tutorial will, therefore, provide an immersive introduction into this exciting area in a way that succinctly characterizes the major achievements so far as well as the major challenges yet to be overcome.

The tutorial will be highly interactive and will be based on a variety of teaching methods, including lectures and hands-on exercises. In particular, one concrete example will be tackled by the participants using multiple approaches so that attendees get a very real sense of the advantages and disadvantages of the different methods.