IST Faculty Candidate Lecture

YesiWell: Human Behavior Modeling in Health Social Networks

Monday, April 4, 2016
11:10 a.m.
202 IST Building

Hai Phan

Hai Phan is a postdoctoral research associate in the Department of Computer and Information Science (CIS), University of Oregon. He holds a Ph.D. in computer science, awarded in 2013 by the French National Centre for Scientific Research (CNRS) - University Montpellier 2 (UM2). His topics of interest primarily focus on data science, machine learning, deep learning, and privacy and security, especially for health informatics, social network analysis, and spatio-temporal data mining. His contributions have been published in at least 25 publications at leading and top-tier venues, such as AAAI, ACM Multimedia, ACM CIKM, ACM TIST, IEEE Intelligent Systems, KAIS, SDM, ECML-PKDD, ACM GIS, etc. Several of them have been selected as best papers and two contributions have been presented as invited talks.

Abstract:

Modeling and predicting human behaviors, such as physical exercise level and intensity, are the keys to prevent the conduct that can lead to a cascade of obesity, and to help spread wellness and healthy behavior in a social network. The user diversity, dynamic behaviors, and implicit social influences make the problem challenging. This talk introduces our YesiWell study, physical activity propagation analysis, and human behavior prediction in health social networks. To protect the privacy of human subjects, this talk further introduces a novel solution to preserve differential privacy in deep learning for mining dynamic health data and social activities of human subjects. Experimental results conducted on a real health social network emphasize the accuracy of our models in human behavior prediction and meaningful observations, which uncover correlation between weight loss and social networks.

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