Consumer Health Information Searching: A Balance between Machine Learning and Human-Information Interaction

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11:00 – 12:30
Room 203, Runme Shaw Building, HKU
(Chair: Dr Samuel Chu)

Abstract
Searching for health information is one of the most frequent online activities. Unfortunately, the results retrieved often are confusing and contain documents from unreliable sources. To make matters worse, search engines rely heavily on terms found in source documents for indexing, which leads to inconsistent use of vocabularies. Lack of “intellectual” control over indexing vocabularies makes the representation process brittle and vulnerable to manipulations and it impacts how users seek information.

In this talk, I will discuss three projects that are exploring ways to improve health information seeking by drawing upon techniques from machine learning and human-information interaction: 1) Automated vocabulary and concept generation system, 2) An interface that employs visualization to support navigation and retrieval of health related information and 3) A machine-learning based consumer health information system that learns from interactions with its users and can support personalized delivery of health information. The talk will conclude with a discussion on privacy and security measures and a new architecture for supporting the online dissemination of sensitive health information.

About the speaker
Javed Mostafa, Frances McColl Distinguished Term Professor at the UNC School of Information and Library Science (SILS), is the Director of the Carolina Health Informatics Program and the Director of the Laboratory of Applied Informatics Research. His research concentrates on information retrieval problems, particularly related to search and user-system interactions in large-scale document/data repositories. He also serves as the Deputy Director of the Biomedical Informatics Core at the NC Translational & Clinical Sciences Institute and has current research engagements in biomedical data mining, analysis, visualization, user interface design, and multi-modal human-computer interaction.

He regularly serves on program and organizing committees for major conferences and participates as reviewer for major grant initiatives. Javed served as an associate editor for the ACM Transactions on Information Systems for eight years. He currently serves as the Editor-in-Chief of the Journal of the Association for Information Science & Technology. He also serves as an editor of the Information Processing & Management Journal and an Associate Editor of the ACM Transactions on Internet Technology journal.

Translating scientific advances to health care improvements is a passion for Javed, and based on support from UNC’s Translational & Clinical Sciences Institute, he co-founded a company concentrating on patient-centric decision-support and streamlined care-workflow called Keona Health (keonahealth.com). At UNC, Javed holds a joint faculty position in information science at the iSchool and in the Biomedical Research Imaging Center at the School of Medicine. Additionally, he holds the title of Adjunct Professor of Community and Family Medicine, School of Medicine, Duke University.

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