Speaker: Professor Eric Zheng, Dallas

Date: Friday, March 28, 2014

Time: 1:30 pm – 2:45 pm

Location: Room 1518

Title: The Power of Silence: An Analysis of the Aggregation and Reporting Biases in User-Generated Contents

Abstract:

User-generated contents (UGC) such as online reviews are inherently incomplete since we do not capture the opinions of users who do not write a review. These silent users may be systematically different than those who speak up. Such differences can be driven by users’ differing sentiments towards their shopping experiences as well as their disposition to generate UGC. Indiscriminately aggregating UGC across different sentiment levels can lead to an aggregation bias and overlooking the silent users’ opinions can result in a reporting bias. We develop a method to model users’ UGC generating process and then rectify these two biases simultaneously through an inverse probability weighting (IPW) approach. In the context of users’ movie review activities at Blockbuster.com, we found that the average probability for a customer to post a review is 0.06 when the customer is unsatisfied with a movie, 0.23 when indifferent, and 0.32 when satisfied. A user’s reporting probability with positive experience first order stochastically dominates the one with negative experience. We then adjust common UGC measures such as review volume and sentiment using these estimated reporting probabilities as weights. We show that these rectified measures yield superior predictive power, as opposed to the raw ones. Our proposed approach provides a realistic solution for business managers to properly utilize incomplete UGC.

Bio:

Zhiqiang (Eric) Zheng is an associate professor in information systems at the University of Texas at Dallas. He received his Ph.D. in IS from the Wharton school. His main research interests center on advanced business analytics for healthcare, finance and social media businesses. He has published papers in Management Science, Information Systems Research, MIS Quarterly and Informs Journal on Computing. He currently serves on the editorial board of Information Systems Research and Informs Journal on Computing.