Integrated Information Technology
College of Engineering and Computing
UNIVERSITY OF SOUTH CAROLINA

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Koustuv Saha, Ph.D.

Candidate for Joint Appointment

AI Institute & Integrated Information Technology

"Measuring Wellbeing in Situated Context with Social Media and Multimodal Sensing: Promises and Perils"

Tuesday, April 4, 2023

11:15am-12:30pm

Virtual Presentation

Background

Koustuv Saha was a Senior Researcher at Microsoft Research, Montreal, in the Fairness, Accountability, Transparency, and Ethics in AI (FATE) group. He completed his Ph.D. in Computer Science from Georgia Tech in 2021, advised by Prof. Munmun De Choudhury. His research interest is in social computing, computational social science, human-centered machine learning, and FATE. He adopts machine learning, natural language, and causal inference analysis to examine human behavior and wellbeing using different forms of digital data, including social media and multimodal sensing data. His work questions the underlying assumptions of data-driven inferences and the possible harms such inferences might lead to. His research is situated in an interdisciplinary and human-centered context and bears implications for various stakeholders. His work has been published at various venues, including CHI, CSCW, ICWSM, IMWUT (UbiComp), Scientific Reports, JMIR, FAT* (now FAccT), among others. He is a recipient of the 2021 Outstanding Doctoral Dissertation Award from the College of Computing at Georgia Tech, Foley Scholarship Award from the GVU Center, Snap Research Fellowship, and a finalist of the Symantec Graduate Fellowship. His research has won the Outstanding Study Design Award at ICWSM, and has been covered by several media outlets, including the New York Times, Vox, CBC Radio, NBC, 11Alive, the Hill, and the Commonwealth Times. During his Ph.D., he did research internships at Snap Research, Microsoft Research, Max Planck Institute, and Fred Hutch Cancer Research. Earlier, he completed his B.Tech (Hons.) in Computer Science and Engineering from the Indian Institute of Technology (IIT) Kharagpur. He was awarded the NTSE Scholarship by the Govt. of India, and he has six years of overall Industry research experience.

Link to his website: https://koustuv.com/

Abstract

Measuring Wellbeing in Situated Contexts with Social Media and Multimodal Sensing: Promises and Perils

A core aspect of our social lives is often embedded in the communities we are situated in. Our shared experiences and social ties intertwine our situated context with our wellbeing. A better understanding of wellbeing can help devise timely support provisions. However, traditional forms of wellbeing measurements have limitations, motivating an increasing interest in supporting wellbeing through passive sensing technologies. Parallelly, social media platforms enable us to connect and express our personal and social lives with others. Given its ubiquity, social media can be considered a “passive sensor” to obtain naturalistic data, which can also be combined with various multimodal sensing to comprehensively measure wellbeing. However, wellbeing sensing technologies can lead to unintended outcomes and cause harms. Therefore, despite the potential, are we ready to deploy these wellbeing sensing technologies in the real world yet?

In this talk, Koustuv Saha will present theory-driven computational and causal methods for leveraging social media in concert with complementary multisensor data to examine wellbeing, particularly in situated communities such as college campuses and workplaces. He will also interrogate the meaningfulness of the data and inferences and reflect on how these approaches can potentially be misinterpreted or misused without additional considerations. To bridge the gap between the theoretical promise and practical utility, he will present the importance of evaluating the needs, benefits, and harms of wellbeing sensing technologies in practice. This talk will propel the vision toward questioning the underlying assumptions and in responsible design and deployment of wellbeing sensing technologies (if at all) for situated communities and the future of work.