BUET ACM CHAPTER

presents

Information Extraction and Fusion for Improving Health Safety

Speaker: **Sarah Masud Preum**

Incoming Assistant Professor, Computer Science, Dartmouth College, USA

Postdoctoral Research Scholar, School of Computer Science, Carnegie Mellon University, USA

Sarah M. Preum is an incoming Assistant Professor in Computer Science Department at Dartmouth College. Currently, Sarah is a Postdoctoral Research Scholar in the School of Computer Science at Carnegie Mellon University. Her research interest lies in the intersection of artificial intelligence and cyber-physical systems. Sarah has received her Ph.D. in CS from the University of Virginia. Before joining UVA, she served as a lecturer in the Department of CSE at BUET. Sarah is a member of the 2020 international cohort of the Rising Stars in EECS. She is a recipient of the UVA Graduate Commonwealth Fellowship, the Adobe Research Graduate Scholarship, the NSF Smart and Connected Health Student Award, and the UVA Big Data Fellowship. Her work has been published in premier CS conference proceedings and journals, including ICDE, AAAI, CIKM, PerCom, IPSN, ACM CSUR, and IEEE Transactions of CPS. She is serving on the technical program committee of AAAI 2021 and PerIot 2021. She also served as an invited reviewer of IEEE TKDE 2019, ACM Health 2020, LREC 2020, and AMIA 2020.

Abstract

We are increasingly interacting with pervasive applications from various domains, including smart health and intelligent assistants. However, tremendous challenges remain about understanding the effects of such interactions and ensuring the safety of pervasive systems. In this talk, I will demonstrate how data-driven, knowledge-integrated information extraction, and fusion techniques can increase the safety and effectiveness of human-centric systems. I will present novel textual inference methods, time-series prediction models, and information fusion techniques to improve health safety and enable intelligent assistants. I will demonstrate how I address the challenges of low training data, knowledge integration, and interpretability for safety-critical applications with domain constraints. I will also cover how these solutions can be generalized for other pervasive applications beyond smart health. Finally, I will propose natural language processing, multi-modal data fusion, and knowledge engineering techniques to develop more capable, personalized intelligent assistants.

When: Thursday, 26th November, 2020 (8:00 PM)

Where: Online. Zoom Meeting ID: 693 8960 1879, Password: 921139

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