



Department of Computer Science

Privacy-aware Computing in Mobile Health Systems

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Hosted by Kasthuri Jayarajah

Date: Monday, December 11, 2023

Coffee: 2:15 PM – 2:30 PM

Time: 2:30 PM – 3:30 PM

Location: GITC 4402 (4th floor Seminar Lecture Hall)

WebEx Link: <https://njit.webex.com/njit/j.php?MTID=m5d46ab85ed6b8f971a5974ce5179f7c9>

<http://cs.njit.edu/seminars>

Abstract:

One of the main hindrances to integrating mobile technologies into real-world healthcare applications is the privacy issue. First, compared with traditional clinical computer systems, mobile health systems encounter a much larger attack surface due to their inherent high accessibility. Round-the-clock data collection in mobile health systems is always at odds with privacy preservation. Second, mobile health data are intrinsically heterogeneous and continuously streaming, which poses a challenge in harmonizing the privacy protection requirements across various data formalities and dynamics. To address these privacy-preserving challenges in the mobile health era, my research has primarily focused on the following aspects: 1) Compression-aware Privacy Computing to tame privacy protection in mobile data heterogeneity and dynamics. 2) Fairness-aware Privacy Computing to solve privacy preservation disparities in mobile health services. My research innovation has been applied to multiple mobile health studies, including mental health intervention, wound care, medication adherence detection, and medicine effectiveness assessment for Parkinson's disease self-management.

Bio:

Huining Li is a Ph.D. candidate in the Computer Science and Engineering Department at the University at Buffalo, SUNY, advised by Professor Wenyao Xu. Her research interest lies broadly in internet-of-things, cybersecurity, and mobile computing. Especially, her recent focus is on applying research advancement to the field of mobile health. She has authored 28 papers in top-tier conferences and journals, including ACM MobiCom, MobiSys, SenSys, UbiComp, IEEE TMC, NDSS, ICHI, Elsevier Smart Health, and BodyNet. Her work has received three Best Paper Awards (SenSys'19, BodyNet'21, and ICHI'22) and one Best Paper Candidate (SenSys'22). Also, her research work has been recognized in various scholarly venues, including one 2023 IEEE EPICS Award (Elderly care wearables), Best Design Award Runner-up in the 2021 IEEE Healthcare Summit (COVID-19 Data Hackathon), and several research competition awards (e.g., UB Blackstone LaunchPad). She was selected for EECS rising star in 2023.