



COLLEGE of ENGINEERING AND PHYSICAL SCIENCES

SCHOOL OF COMPUTER SCIENCE

PhD Seminar 1

Wednesday March 1, 2023 at 1:30pm via Zoom

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*Current Trends, Challenges, Solutions, and Research Gaps in
Text Data Privacy*

Advisor: Dr. Rozita Dara

Advisory: Dr. Kieran O'Doherty [Psychology]

Advisory: Dr. Fei Song

Abstract:

The emergence of smartphones and internet accessibility around the globe have enabled billions of people to connect to the digital world. A voluminous amount of data accumulates from these devices and the digital footprint of internet users. However, many datasets contain sensitive and personal information of internet users, increasing the ethical and privacy concerns of such data processing. Due to the popularity of instant messaging applications and social media, a large quantity of personal data is in text format, and processing text data in a privacy-preserving manner poses unique challenges. Despite several attempts to analyze the privacy solutions of personal data processing, a perspective from text data is deficient in existing works.

This seminar will present a comprehensive review of privacy-enhancing solutions for text data analytics. A categorization of several privacy risks related to text data processing will be proposed. Evaluation methods for text data privacy and benchmarks will be described. Existing privacy-enhancing solutions for text data will be analyzed in light of the privacy risks. Finally, research gaps are identified and future research directions will be outlined.