



Echoes of Authenticity: Reclaiming Human Sentiment in the LLM Era

Date: 22 February 2024 (Thursday)

Time: 4:30pm - 5:30pm

Seminar Link: <https://cityu.zoom.us/j/93234781356>



ABSTRACT

This seminar scrutinizes the unintended consequences of employing large language models (LLMs) like ChatGPT for editing user-generated content, particularly focusing on alterations in sentiment. Through a detailed analysis of a climate change tweet dataset, we uncover that LLM-rephrased tweets tend to display a more neutral sentiment than their original counterparts. By replicating an established study on public opinions regarding climate change, we illustrate how such sentiment alterations can potentially skew the results of research relying on user-generated content. To counteract the biases introduced by LLMs, our research outlines two effective strategies. First, we employ predictive models capable of retroactively identifying the true human sentiment underlying the original communications, utilizing the altered sentiment expressed in LLM-rephrased tweets as a basis. While useful, this approach faces limitations when the origin of the text—whether directly crafted by a human or modified by an LLM—remains uncertain. To address such scenarios where the text's provenance is ambiguous, we develop a second approach based on the fine-tuning of LLMs. This fine-tuning process not only helps in aligning the sentiment of LLM-generated texts more closely with human sentiment but also offers a robust solution to the challenges posed by the indeterminate origins of digital content. This research highlights the impact of LLMs on the linguistic characteristics and sentiment of user-generated content, and more importantly, offers practical solutions to mitigate these biases, thereby ensuring the continued reliability of sentiment analysis in research and policy.



Professor Ram Gopal

GUEST SPEAKER'S PROFILE

Ram D. Gopal is the Information Systems Society's Distinguished Fellow and Alan Turing Institute's Turing Fellow, and a Professor of Information Systems Management and Analytics at the Warwick Business School. He also serves as the Academic Director of the Gillmore Centre for Financial Technology at the Warwick Business School. He previously served as the Pro-Dean for Research at the Warwick Business School (2020-2023) and as Head of the Department of Operations and Information Management in the School of Business, University of Connecticut (2008-2018). He has a diverse and a rich portfolio of research that spans analytics, health informatics, financial technologies, information security, privacy and valuation, intellectual property rights, online market design and business impacts of technology. He has served on the editorial boards of top journals including Information Systems Research and has served as the President of the Workshop on Information Technologies and Systems organization from 2016 to 2018. At the Warwick Business School, he teaches 'Digital Transformation' on the Full-time MBA and Executive MBA (London), as well as 'Digital Finance, Blockchain & Cryptocurrencies' on the MSc in Management of Information Systems and Digital Innovation, and 'Text Analytics' on the MSc in Business Analytics.