STEM Cluster/CDMS Research Seminar

Testing AI-based systems

Tuesday, 29th August 2023, 10:00 am

https://uws.zoom.us/j/81730093279?pwd=cHdlR2FtVHJPREk1aU9WWFNSczRBUT09

<u>Speaker</u>: A/Prof Aldeida Aleti, Monash University

<u>Abstract</u>: Software Testing is a well-established area in software engineering, encompassing various techniques and methodologies to ensure the quality and reliability of software systems. However, with the advent of artificial intelligence systems, new challenges arise in the testing domain. These systems, capable of generating novel and creative outputs, introduce unique complexities that require novel testing approaches. In this talk, I aim to explore the challenges posed by AI systems and discuss potential opportunities for future research in the field of testing. I will touch on the specific characteristics of AI systems that make traditional testing techniques inadequate or insufficient. These systems often employ complex learning algorithms, generate outputs that can vary widely based on different inputs or conditions, etc.. By addressing these challenges and pursuing further research, we can enhance our understanding of how to safeguard AI and pave the way for improved quality assurance in this rapidly evolving domain.

<u>Bio</u>: Aldeida Aleti is an Associate Professor at Monash University, specializing in the intersection of AI and software engineering. Her research focuses on developing AI methods that automate various software development tasks, including software design and testing. She has also contributed to the field of testing by devising testing approaches to evaluate the quality of AI-based systems. With her expertise, Aldeida has led multiple teams working on AI and software engineering projects, amounting to a cumulative value exceeding $3M. She takes pride and joy in mentoring and advising over 15 PhD students and 5 research fellows, contributing to their academic and professional growth. In addition to her academic role, Aldeida holds the position of Associate Dean for Engagement and Impact in the Faculty of IT at Monash University. In this influential capacity, she has successfully established and nurtured substantial partnerships with industry-leading organizations, fostering collaborative initiatives on a large scale.

Rodrigo Calheiros is inviting you to a scheduled Zoom meeting.

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