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IYBSSD2022

NITheCS COLLOQUIUM:
Artificial Intelligence for sustainable development – a systems perspective
Prof Deshen Moodley (University of Cape Town)

Monday, 24 October 2022 | 16h00 – 17h00 SAST

This event aligns with a topic of the International Year of Basic Sciences for Sustainable Development

ABSTRACT

Artificial Intelligence (AI) has emerged as an exciting technology that has huge potential to shape the future. While AI holds much promise for dealing with the sustainable development goals, it is unclear how it will evolve and who will reap the benefits of AI. Given its current trajectory in South Africa, it is likely that niche technology companies and start-ups will develop advanced expertise and compete to dominate the AI space. Innovative AI applications will develop in an ad hoc manner and will be constrained to specific application areas. This will drive up the cost of AI and constrain AI to specialised applications that benefit only a small part of society.

A broader and more long-term vision is to establish local, regional or country-wide AI innovation networks. From a country perspective this will involve a long-term skills development plan, accessibility paths for reskilling, and the development and maintenance of a set of tools, methods and platforms for rapid prototyping of AI techniques. Such an AI innovation ecosystem will provide a collaborative platform for academics, industry and government to guide and direct the development of AI and provide rapid dissemination and access to advanced AI knowledge beyond Computer Science and Engineering. The establishment of such ecosystems will be crucial to accelerate innovation using AI, reskilling, and skills development, lower the cost of AI, and make AI accessible to a broader community.

In this talk, I will provide both a technical and a social perspective of AI. From the technical perspective I will introduce the notion of augmented AI systems and describe some of the AI systems we are exploring in the energy, health and earth observation domains. I will then propose a vision and strategy for a national AI innovation ecosystem for South Africa.

BIOGRAPHY

Deshen Moodley is an Associate Professor in the Department of Computer Science at UCT and co-director and co-founder of SA's national Centre for Artificial Intelligence Research (CAIR). His research lab, the Adaptive and Cognitive Systems Lab, explores different artificial intelligence techniques to create cognitive and adaptive systems in diverse domains, including the health, energy, finance and earth observation domains. He is currently investigating architectures and methods for combining logic-based software agents with probabilistic and machine learning techniques in real world decision-making systems.

In 2021, he was selected as one of the 19 fellows for the 4th Intercontinental Academia (ICA) on Intelligence and AI. He is the only ICA fellow based on the African continent.

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