

Agentic AI for Sustainable Applications

13:30 – 18:00

School of Architecture, Computing and Engineering

University of East London, Docklands Campus

ABOUT THIS WORKSHOP

This hands-on workshop introduces key concepts in agentic AI for health systems, a rapidly evolving area where new capabilities are emerging faster than many organisations can safely adopt them. As AI is increasingly used to support clinical and operational decisions, it is essential to understand not only what these systems can do, but also their limitations—particularly around reliability, hallucination, and safe use in practice. Through a guided, interactive scenario, participants will explore how AI can support decisions around patient risk and clinical interventions, while considering cost, resource use, and system constraints. The workshop highlights how human-in-the-loop oversight and lightweight validation mechanisms can improve the reliability of AI-supported decisions. Participants will work with a realistic immersive scenario in which an overstretched clinical team must decide how to prioritise limited resources across patients with different levels of risk, uncertainty, and potential benefit. Rather than treating AI as a black-box answer generator, the exercise invites participants to test how an agentic AI workflow can gather evidence, propose options, flag uncertainty, and support transparent decision-making. By engaging with trade-offs around patient safety, operational pressure, cost, and sustainability, participants will see how AI can be used responsibly to augment—not replace—clinical and organisational judgement.

Attendees will leave with a working prototype of a multi-agent system, understanding of agent safety and trust boundaries, and the ability to evaluate agentic AI for real-world sustainability domains.

WORKSHOP SCHEDULE

13:30	Welcome & Introduction — Context of Agentic AI in Sustainability
13:50	Part 1: Concepts — Agent Architectures, Orchestration Patterns, Tool Use
14:40	Part 2: Hands-On — Building a Single Agent with Tool Calls (Python + API)
15:30	Coffee Break
15:45	Part 3: Multi-Agent Design — Orchestrator/Subagent Patterns, Trust & Safety
16:30	Part 4: Live Build — Multi-Agent Sustainability Scenario (group exercise)
17:30	Showcase, Discussion & Q&A
18:00	Wrap-up, Feedback & Close

WORKSHOP PRESENTERS



Mahdi Jelodari, PhD
Founder, Learnify Health



Shamim Akbari Bavani
MSc in AI, UCL | Learnify Health

PRESENTER BIOGRAPHIES

Mahdi Jelodari, PhD — Mahdi is a 2X entrepreneur with a PhD in Computer Science from University of Manchester and 8+ years of industry experience in AI adoption and deployment in healthtech and infrastructure. Mahdi's work has been funded by EPSRC and InnovateUK with patent innovations as outcome.

Shamim Akbari Bavani — Shamim did her undergraduate degree in Computer science and completed her MSc AI in biomedicine/healthcare at UCL. Her dissertation focused on diffusion based models for surgical workflow prediction. Her work on reinforcement learning for virtual patients using agentic AI will appear in ASME soon.

TARGET AUDIENCE

- PhD researchers and postdoctoral fellows in AI/ML
- Academic faculty exploring agentic AI applications
- Industry ML engineers and AI practitioners
- MSc students with Python and ML foundations

PREREQUISITES

Basic to Intermediate Python programming; familiarity with LLMs and prompting

£150 registration fee

Register at: <https://www.icasa-conf.co.uk/registration/>

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Please note that the workshop will run subject to sufficient registrations.