SORS: Best practices for trustworthy and ethical AI in biomedicine

AI4S registration link

Abstract

Despite significant advances in artificial intelligence (AI) for healthcare, its applicability remains hindered by significant challenges in real-world practice. These include limited trust and ethical risks, such as generalisability issues, biases, lack of transparency, potential errors, and safety concerns. To encourage the acceptance and adoption of new AI tools, it is crucial to establish best practices that ensure the development of trustworthy and ethical AI tools for healthcare practice. This talk will introduce FUTURE-AI, a code of practice developed by an international consortium of 117 experts from 50 countries to promote AI tools that earn the trust and acceptance of patients, clinicians, health organisations, and regulatory authorities. The FUTURE-AI guideline advocates for Fair, Universal, Traceable, Usable, Robust, and Explainable AI solutions. It provides step-by-step guidance with actionable recommendations that span the entire AI production lifecycle, from design and development to validation and deployment. The talk will include practical examples from diverse fields such as oncology, cardiology, and women's health to demonstrate the guideline's promise in various healthcare contexts.

Short Bio

Karim Lekadir is the Director of the Artificial Intelligence in Medicine Lab at the University of Barcelona (BCN-AIM). He obtained a PhD from Imperial College London (UK) and was previously a postdoctoral researcher at Stanford University (USA). His current research focuses on the development of big data and

artificial intelligence (AI) solutions from complex biomedical data, such as medical imaging, clinical, environmental and mobile data. He is interested in the concept of trustworthy AI and related methods such as domain adaptation, bias correction, federated learning, AI traceability and AI validation. He is the Scientific Coordinator of several large-scale research projects funded by the European Commission and related to big data and AI, such as in the field of cardiology (euCanSHare, DataTools4Heart), oncology (EuCanImage, RadioVal) and mental health (EarlyCause). He is the PI of an ERC Consolidator Grant (AIMIX) to develop novel AI methods for accessible medical imaging in low-resource settings.

Speakers

Speaker: Prof. Karim Lekadir, ICREA Research Professor, University of Barcelona
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