Special Issue

Explainable and Trustworthy AI in Health and Biology: Enabling Transparent and Actionable Decision-Making

Message from the Guest Editor

The Issue focuses on explainable and trustworthy artificial intelligence (XAI) techniques in healthcare and biological sciences.

We welcome the topics: novel XAI methods designed for medical and biological data; case studies showing how explainability supports clinical decision-making; human–AI interaction and how explanations impact trust and adoption;

Regulatory and ethical considerations for trustworthy AI in health contexts; benchmarks, evaluation frameworks or datasets for assessing explainability and clinical relevance; comparative studies between black-box and interpretable models; integration of domain knowledge and expert feedback into AI explanations; theoretical or conceptual work on trust, transparency, and responsibility in health AI.

It stresaes real-world use cases where explanations have influenced practice or decision-making; explores interplay between explanation, trust and clinical actionability; highlights the user-centered design of explanations, including qualitative evaluations with healthcare professionals or domain experts; encourages contributions that consider ethical, regulatory, and societal dimensions of explainable and trustworthy AI.

Guest Editor

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