

Special Issue

Dual Perspectives on Anomaly Detection: Detecting Anomalies with AI, Detecting Anomalies in AI

Message from the Guest Editors

This Special Issue intends to bring together two research directions that, although related, have mostly evolved separately.

- The first is about using AI to detect anomalies. Examples include identifying faults in industrial equipment, diagnosing medical conditions, detecting financial fraud or cyberattacks.
- The second direction explores anomalies arising within AI models. Recognising and mitigating these concerns is fundamental to fostering trustworthy and safe AI systems.

We welcome original research articles, reviews, and application studies that emphasise either innovative AI methods for the detection of anomalies or strategies for identifying and correcting the abnormal behaviour of AI models. Areas of interest for this Special Issue include, but are not limited to, the following topics:

- AI and machine learning techniques for anomaly detection;
- Data-driven diagnosis and monitoring;
- Semi-supervised and unsupervised learning methods applied to anomaly detection;
- Reinforcement learning approaches for anomaly detection;
- Explainable and interpretable models for anomaly detection;
- Practical applications in industry, energy systems, healthcare, cybersecurity, and finance.

Guest Editors

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Deadline for manuscript submissions



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About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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