

Special Issue

AI-Driven Cybersecurity: Advancing Threat Detection and Defense

Message from the Guest Editors

This Special Issue, titled “AI-Driven Cybersecurity: Frontiers in Threat Detection and Defense”, aims to showcase the latest research developments and practical applications of AI in the field of cybersecurity. By gathering insights from both academia and industry, this issue will provide a platform on which the key challenges and opportunities in applying AI may be discussed in order to address modern and emerging cybersecurity threats.

Topics of interest include, but are not limited to:

- AI-powered threat detection and response systems, including machine learning and deep learning approaches.
- Securing Internet of Things (IoT) devices and critical infrastructure using AI.
- Predictive analytics for identifying vulnerabilities and mitigating risks.
- Challenges of adversarial attacks against AI-driven cybersecurity systems (e.g., adversarial machine learning, data poisoning).
- Case studies and real-world applications of AI in cybersecurity.

Keywords: Artificial Intelligence in Cybersecurity; Threat Detection and Response; Machine Learning for Cyber Defense; Ethical Challenges in AI-Driven Security; Predictive Analytics in Security; Adversarial Machine Learning

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Deadline for manuscript submissions

30 September 2026



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/272751

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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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