Special Issue

Machine Learning for Cybersecurity: Threat Detection and Mitigation

Message from the Guest Editors

Machine Learning for Cybersecurity: Threat Detection and Mitigation is a critical application of artificial intelligence that plays a pivotal role in safeguarding digital systems and data. This technology leverages advanced algorithms and models to analyze vast amounts of data, identifying and addressing potential security threats in real-time. By scrutinizing network traffic, user behavior, and system vulnerabilities, machine learning systems can detect anomalies and patterns that signify potential attacks, thereby enhancing overall cybersecurity measures. These systems continuously adapt and evolve, learning from new threats and updating their defense mechanisms to remain ahead of cybercriminals. This approach greatly reduces false positives and helps security teams prioritize and respond to the most significant threats swiftly. Machine learning also enhances threat mitigation by automating the incident response process, reducing human intervention, and allowing organizations to thwart attacks before they can inflict substantial damage. Furthermore, it facilitates predictive analysis, allowing organizations to foresee and prevent potential threats.

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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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