Recent Advances in Intrusion Detection Systems Using Machine Learning

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Deadline for manuscript submissions:
15 October 2024

Message from the Guest Editors

Dear Colleagues,

Cyber-attacks are not only increasing but are also evolving rapidly to become highly sophisticated, thereby leading to increasing challenges in precisely detecting threats and intrusions, making the development of advanced intrusion detection systems (IDSs) more crucial than ever. Many research ideas targeting IDSs using artificial intelligence (AI) and machine learning (ML) techniques have been proposed. Research may focus on (but is not limited to) the following topics:

- Deep learning for IDSs;
- Federated learning for intrusion detection ;
- Anomaly detection for IDSs;
- Concept drift in IDSs;
- Adaptive learning for IDSs;
- Network-based IDSs using AI/ML;
- Host-based IDSs using AI/ML;
- IDSs using AI/ML for cyber-physical systems;
- IDSs using AI/ML for IoT/IIoT;
- Privacy and trust in IDSs;
- Privacy preservation techniques in IDSs;
- Large-scale distributed intrusion detection.

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Special Issue

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Message from the Editor-in-Chief

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