Special Issue

Advances in Machine Learning for Anomaly Detection

Message from the Guest Editor

This Special Issue aims to address modern challenges that anomaly detection algorithms face in emerging applications such as interaction-based complex anomalies in graph data (e.g., video, social media), the high-dimensionality of data (e.g., time series, video), and real-time detection requirements (e.g., autonomous driving, cyberattack detection). We encourage the submission of research articles contributing new methods/datasets, as well as survey articles reviewing the literature, to this Special Issue. Topics of interest include, but are not limited to, the following:

- Detecting interaction-based complex anomalies in non-Euclidean data such as social networks, video, etc.
- Anomaly detection in high-dimensional time series data.
- Anomaly detection for autonomous vehicles.
- Intrusion detection for emerging cyberattacks.
- Adversarial machine learning attacks against anomaly detection algorithms.
- Defenses to protect anomaly detection algorithms from adversarial machine learning attacks.
- Detection of adversarial machine learning attacks against artificial intelligence (AI) models such as large language models (LLMs) and vision–language models (VLMs).

Guest Editor

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