Special Issue

AI-Based Intrusion Detection Techniques for Vehicle Networks

Message from the Guest Editor

The rapid development of intelligent transportation systems and the increasing connectivity of vehicles have made the in-vehicle network a critical component that enables the exchange of data between various electronic control units (ECUs) and external systems. However, this interconnectivity also exposes vehicles to a wide range of cybersecurity risks. Traditional security measures are often inadequate to defend against sophisticated cyberattacks. This necessitates the development of advanced intrusion detection techniques that can effectively identify and mitigate potential threats. Artificial intelligence (AI) leverages the power of machine learning, deep learning, and other AI algorithms to indicate potential cyberattacks in in-vehicle networks. AI techniques can continuously learn and adapt to changes in vehicle behavior, improving their ability to detect and mitigate evolving cyber threats.

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