Prediction of DoS attacks in external communication for self-driving vehicles using a fuzzy petri net model

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Abstract:

In this paper we propose a security system to protect external communications for self-driving and semi self-driving cars. The proposed system can detect malicious vehicles in an urban mobility scenario. The anomaly detection system is based on fuzzy petri nets (FPN) to detect packet dropping attacks in vehicular ad hoc networks. The experimental results show the proposed FPN-IDS can successfully detect DoS attacks in external communication of self-driving vehicles.

Keywords