基于深度学习网络的物联网非法入侵识别研究

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摘　要：为了获得理想的物联网非法入侵自动识别结果，提出基于深度学习网络的物联网非法入侵自动识别方法.首先采用物联网非法入侵的数据，并从中提取数据的异常入侵行为特征，然后将特征作为深度学习网络的输入，物联网非法入侵类型为作为输出，通过深度学习网络的训练建立物联网非法入侵识别分类器，最后与其它方法进行了物联网非法入侵识别仿真实验，结果表明，深度学习网络获得了高精度的物联网入侵行为识别结果，能够有效保证物联网安全，具有一定的实际应用价值.

关键词：深度学习网络；物联网案例；非法入侵；行为识别；特征向量

Research on internet of things illegal intrusion recognition based on deep learning network

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Abstract：In order to obtain the ideal results of the automatic identification of the illegal invasion of the Internet of things, an automatic identification method of the illegal invasion of the Internet of things based on the deep learning network is proposed. Firstly, we use the signal of Internet of things illegal invasion, and extract the time-domain and frequency-domain characteristics of abnormal invasion signal, then take the characteristics as the input of deep learning network, and the type of Internet of things illegal invasion is as the output. Through the training of deep learning network, we establish the Internet of things illegal invasion recognition classifier. Finally, we carry out the simulation experiment of Internet of things illegal invasion recognition with other methods The results show that the deep learning network can obtain high-precision pattern recognition results of Internet of things intrusion behavior, which can effectively ensure the security of Internet of things, and has a certain practical value.

Key words：deep learning network; Internet of things cases; illegal intrusion; behavior recognition; feature vector

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