Solid State Technology



# Detection Of Minority Attacks Using Smote Random Forest With Harmony Search (Hsmoter)

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## Abstract

- Over the years, people have relied on technology and computer networks for their everyday operations, such as chatting, trading and advertising. These networks are constantly subjected to several internet threats and be supposed to consequently be shielded against infringement and intrusion from their integrity and accessibility. The reason is that fresh automated hacking tools appear on a daily basis, and these instruments are readily accessible on the internet along with multiple system vulnerability data. The intrusion detection system (IDS) is recognized as the method of scanning and analyzing intrusion alert occurrences that occur in a computer system or network. Data mining methods have been commonly used to make intrusion detection systems more effective. While some techniques of data mining are economical in characteristic sure styles of attacks, there aren't any familiar strategies which will be wide enforced and coherent outcomes for numerous styles of attacks. The whole scenario makes it important and difficult to detect cyber- based assaults on computer networks. We suggest in this article a fresh technique of hybrid structure based on SMOTE with random forest and harmony search optimization for preprocessing. The proposed method is implemented in NSL-KDD data sets, that shows, the suggested method produce good performance metrics and can attain a better detection rate of U2R and R2L attacks.

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