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Patent Search

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Abstract:

AN ALGORITHM FOR CYBER THREAT DETECTION AND THE MONITORING OF SECURITY BASED ON SEMANTIC MACHINE LEARNING ABSTRACT Security refers to measures taken to protect the accessibility and reliability of information shared within the global digital community. Information security measures often guard against unwanted access, disclosure, manipulation, alteration, or destruction of virtual facts on both hardware and software platforms. According to an assessment made by professionals working in the field of information security, new cyberattacks continue to surface in all business operations. It is suggested to develop a system pipeline that can reliably identify malicious users and be resilient to changes in organisational structures and log file structures. For better insider threat detection, we applied automated deep feature engineering. DFS generates an enormous number of useful features, which speeds up the feature engineering stage and enables non-expert domains to produce solutions with high-quality descriptive features. Due of CERT's high unbalance, we investigated the effect of the SMOTE oversampling technique to lessen the impact of data with an uneven class distribution. The findings demonstrated that SMOTE favours memory over precision. We used PCA to minimise the amount of features and decrease redundancy in order to improve system performance. We tried a number of ML techniques, either through anomaly detection approaches or classification ones, to categorise behaviours as dangerous or benign. The experiment findings show that the SVM classification approach performs better than the other models.

Complete Specification

Description:FORM2
THE PATENTS ACT,1970(39of1970)
&
THE PATENT RULES,2003
Complete Specification
(See section 10 and rule 13)

1. Title of the Invention: AN ALGORITHM FOR CYBER THREAT DETECTION AND THE MONITORING OF SECURITY BASED ON SEMANTIC MACHINE LEARNING

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