

A machine learning based AIS IDS.

ABSTRACT

In recent years we have seen a very great interest in combining naturally inspired techniques with existing conventional approaches. In this study we combined Negative Selection theory, one of most important theories in AIS, and knowledge production rules to propose a novel IDS. To generate the detectors first we produced a set of basic rules using knowledge production techniques with the help of WEKA, next the new detectors was generated and matured inside negative selection module and the basic rules. After experimenting the proposed model using DARAP 1999 dataset, this model showed a good performance compared to our previous models.

Keyword: Intrusion detection; Artificial immune system; Negative selection; Data mining; Machine learning; WEKA.