

ABSTRACT:

This paper presents a hybrid approach that consists of two different methods from machine learning technique, which are the Artificial Neural Network (ANN) and Naïve Bayes. The proposed technique is purposely developed for classifying the two classes of imbalanced datasets. Architecture of ANN is based on a single layer feedforward ANN for binary classification and the learning algorithm is assisted by the Particle Swarm Optimization (PSO) algorithm. As a main classifier, the Naïve Bayes is still being kept by using a conventional method. Consequently, by comparing with the individual classifiers that are used in this paper, the proposed approach is capable of improving the prediction performance that is evaluated by geometric mean (Gmean) as the performance measure.