COMPARATIVE ANALYSIS OF PERFORMANCE OF DIFFERENT MACHINE LEARNING ALGORITHMS FOR PREDICTION OF SUCCESS OF BANK TELEMARKETING

[1]ALIYU AISHATU MOHAMMED, [2]MORUFU OLALERE, [3]ABDULLAHI, IBRAHIM MOHAMMED

[1]Department of Computer Science, Niger State Polytechnic, Zungeru, Niger State, Nigeria [2]Department of Cyber Security Science, Federal University of Technology, Minna Niger State, Nigeria [3]Department of Computer Science, Federal University of Technology, Minna Niger State, Nigeria

ABSTRACT

The development in technology has brought revolution in many areas of endeavors across the globe. In recent years, telemarketing has been a popular method of marketing in bank industry. Telemarking is a method of direct marketing in which a salesclerk beseech potential clienteles to buy products or services by means of phone calls. For effective managerial decision, prediction of success of bank telemarketing becomes necessary. Hence, there is need for prediction approach that will predict success of bank telemarketing with high predictive accuracy. As a result, various researchers have proposed different approaches for prediction of success of telemarketing. Machine learning approach is one of the famous approaches used by the previous researchers in this area. Different prediction algorithms have been employed, though not many of these algorithms have been applied in this area. To identify the best machine learning algorithms among the already used and unused becomes impossible. Consequently, this study presents comparative analysis of performance of different machine learning algorithms for prediction of success of bank telemarketing. To achieve this dataset of 45,221 instances with 17 attributes was used to train the algorithms in WEKA environment. The performance of each algorithm measured in terms of Accuracy, Precision, Recall and F- Measure. performance evaluation analysis revealed that Random Forest perfo...