USING MACHINE LEARNING TECHNIC FOR PREDICT THE SUCCESS OF TELEMARKETING

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ABSTRACT

This study focused on predict success of telemarketing using machine learning algorithms. Main aim of this study is find, how to use machine learning technique (Supervised as well as unsupervised) for analysis and making the prediction using existing dataset in banking marketing for creating effective decision making knowledge. The dataset used in this study is downloaded from UCI Irvine machine learning repository (direct marketing campaigns of a Portuguese banking institution). Clustering analysis made in order to identify common pattern between attributes and target variable. Result of that duration attributes is significantly impact on the target variable. There are four different predictive models had built in this study such as Logistic Regression, Random Forest, Decision Tree and SVM in order to predict whether customer will accept the deposit based on the telemarketing calls which they received from bank. The results of the model confirm that Random forest has 90 % accuracy and higher F1 score among other model and it is selected as a best model to predict the potential clients for subscribe long term deposit through bank telephone calls. Additionally study will help to provide more insights to banking personals in order to make long term decision regarding client's telemarketing.

Key words: ***Long term deposit, Machine Learning Algorithms, Bank telemarketing, Supervised Learning, Unsupervised Learning***