Predictive analysis using Machine Learning Algorithms.

Abstract

Machine Learning algorithms are extensively used to predict future outcomes based on past experiences that were recorded in a meticulous manner. These past experiences or data can help us to deduce preliminary insights about the data and what it represents. In this paper few Machine Learning algorithms have been discussed that are helpful in problems where classification of the input in one of the two categories is the prime objective. The dataset in focus is the employee attrition dataset that gives various insights on the main or presumable reasons for an employee to leave a company. The accuracy, precision score, recall score and f1_score for Random Forrest, XGBoost, Adaboost, Gradient boosting and Decision Tree Classifier have been ascertained and comparison have been made. Hyperparameter tuning using the 'RandomSearchCV' python library is also implemented on the better performing algorithms with the goal of achieving better performance.

Keywords: Machine Learning, Random Forrest, XGBoost, Adaboost, Decision Tree, Gradient Boost, Hyperparameters, RandomSearchCV.