

Title: Impact of the Use of Social Media Among University Students Using Machine Learning

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Abstract: This study explores innovative machine learning approaches to investigate how social media affects student behavior. In this study, we have collected a good number of dataset from different students of our university and cleaned, encoded as well as used feature engineering on our raw dataset through different scikit-learn classes for better training outcomes. We have trained our dataset using different types of classifiers like Gradient Boosting, Random Forest, Multi-Layer Perceptron, AdaBoost and Decision Trees Classifiers. We have used k-fold cross-validation for proper evaluation and obtained a high accuracy of 93% for the Gradient Boosting Classifier by analyzing the performance using confusion matrix, representing Area Under the ROC Curve (AUC) and Receiver Operating Characteristic curve (ROC). This study will play a vital role in controlling the upcoming youngster in using their social media.

Keywords: Gradient boosting, K-fold cross-validation, Social media impact

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