

An Analysis of Machine Learning Algorithms for Predicting Student Performance.

Agnes John and Viendra

Department of Computer Science and Applications.

Sharda School of Engineering & Technology, Sharda University, Greater Noida, India

Abstract: *Predicting student performance has been long- standing challenge in education. Machine learning algorithms offer a promising approach to address this challenge by analysing historical data and identifying patterns that can be used to predict future performance. This paper provides a comprehensive review of various machine learning algorithms applied to student performance prediction. We delve into the background the problem, explore different datasets used in related research, discuss the methodologies employed and analyse the limitations and results of existing studies. By understanding the strengths and weaknesses of these algorithms, educators and researchers can make informed decisions about the most suitable techniques for their specific needs.*

Keywords: Machine learning student performance prediction, educational data mining, data student performance has been a long mining, predictive analytics, classifications, regression, neural networks, support vector machines, decision trees, random forest, naïve Bayes, feature engineering, data preprocessing, model evaluation, accuracy, precision, recall, flscore mean squared error and root in the field of student performance prediction, including the application of machine learning algorithms to analyse educational data , extract meaningful insights and forecast future student outcomes