An Application to Predict the Best Study Path for Information Technology Students in Learning Institutes

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Abstract : Early prediction of student performance is an important factor to be gained academic excellence. Whatever the study stream in secondary education, students lay the foundation for higher studies during the first year of their degree or diploma program in Sri Lanka. The information technology (IT) field has certain improvements in the education domain by selecting specialization areas to show the talents and skills of students. These specializations can be software engineering, network administration, database administration, multimedia design, etc. After completing the first-year, students attempt to select the best path by considering numerous factors. The purpose of this experiment is to predict the best study path using machine learning algorithms. Five classification algorithms: decision tree, support vector machine, artificial neural network, Naïve Bayes, and logistic regression are selected and tested. The support vector machine obtained the highest accuracy, 82.4%. Then affecting features are recognized to select the best study path.