UNIVERSITY OF NAIROBI

SCHOOL OF COMPUTING AND INFORMATICS

"Students Performance Patterns Analysis For Decision Making"

BY

Mwangi, Henry N.

P56/P/7919/02

Supervisor

Dr. P. W. Wagacha

Submitted in partial fulfillment of the requirements of the Master of Science in Information Systems
ABSTRACT

Ever since computers were invented, we have wondered whether they might be made to learn. A successful understanding of how to make computers learn would open many new uses of computers and new levels of competence and customization. And a detailed understanding of information processing algorithms for machine learning might lead to a better understanding of human learning abilities (and disabilities) as well.

We do not yet know how to make computers learn nearly as well as people. However, algorithms have been invented that are effective in certain types of learning tasks, and a theoretical understanding of learning is beginning to emerge.

It is with this inspiration that the researcher wish to use some of these Machine Learning algorithms to Learn Student Performance Patterns and Association as well as Prediction in a typical College: Kenya School of Monetary Studies.

Implementing a technique that is efficient yet accurate for college student performance is of significant importance.

In this project I’ll Examine student performance predictions and associations.

Using Decision Trees, the mean grade, English, Mathematics, Continuous performance, attendance and Mock Examination were found to be the best predictors of success (Performance in Final-External Examination).

Using these features, performance based on decision trees was contrasted with Neural Network and KNN as an alternative to prediction.