Abstract

In emerging knowledge economies such as Kenya, organizations rely heavily on their human capital to build value. Consequently, performance management at the individual employee level is essential and the business case for implementing a system to measure and improve employee performance is strong. Data Mining can be used for knowledge discovery of interest in Human Resources Management (HRM). We used the Data Mining classification technique for the extraction of knowledge significant for predicting employee performance using previous appraisal records a public management development institute in Kenya. The Cross Industry Standard Process for Data Mining (CRISP-DM) was adopted for predictive analysis. Decision tree was the main Data Mining tool used to build the classification model, where several classification rules were generated. To validate the developed model, a prototype was constructed and the data collected from the institute’s Human Resource Department was used. Results show that employee performance was highly affected by experience, age, academic qualification, professional training, gender, marital status and previous performance appraisal scores. This paper proposes a prediction model for employee performance forecasting that
enables the human resource professionals to refocus on human capability criteria and thereby enhance the performance appraisal process of its human capital.

References

2410–2420


Index Terms

Computer Science

Information Sciences

Keywords

Employee Performance Prediction, Data Mining, Data Mining Classification, C4.5 (J4.8) Algorithm.