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Predicting ERP User Satisfaction—an Adaptive Neuro Fuzzy Inference System (ANFIS) Approach

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ABSTRACT

ERP projects' failing to meet user expectations is a serious problem. This research develops an Adaptive Neuro Fuzzy Inference System (ANFIS) model, to predict the key ERP outcome "User Satisfaction" using causal factors present during an implementation as predictors. Data for training and testing the models was from a cross section of firms that had implemented ERPs. ANFIS is compared with other prediction techniques, ANN and MLRA. The results establish that ANFIS is able to predict outcome well with an error (RMSE) of 0.277 and outperforms ANN and MLRA with errors of 0.85 and 0.86 respectively. This study is expected to provide guidelines to managers and academia to predict ERP outcomes ex ante, and thereby enable corrective actions to redirect ailing projects.

KEYWORDS

ANFIS, ERP Implementation Outcome, Prediction, Failure Detection, CSFs, Causal Factors

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