IJDACR
International Journal Of Digital Application & Contemporary Research

Software Fault Estimation using Fuzzy C-Means and Neuro-Fuzzy Classification

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*Abstract –*The fault-proneness of a software module is the probability that the module contains faults and a software fault is a defect that causes software failures in an executable project. Early detection of fault prone software components enables verification experts to concentrate their time and resources on the problem areas of the software systems under development. In this paper, the performance comparison of a Software Fault Prediction System is done using two techniques; the first technique is Fuzzy C-Means clustering and another one is hybrid method which is combination of Fuzzy c-means clustering and Neural Networks approach (Neuro-Fuzzy). Both of the methods have been performed with the real time data set named PC1, taken from NASA MDP software projects. The performance is recorded on the basis of accuracy, net reliability, and RMSE and MAE values.

Keywords – **Fault-Proneness, Fuzzy C-Means, Neural Networks, Neuro-Fuzzy, NASA MDP.**