

Software Fault Prediction Using Fuzzy C-Means Clustering and Feed Forward Neural Network

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Abstract: Modern systems are primarily based on the software based systems. Software quality and reliability have become the main concern during the software development. It is very difficult to develop software without any fault. 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 research, a hybrid approach based on K-means clustering based approach and feed-forward neural network based approach has 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, MAE and RMSE values. The performance is better in case of our hybrid approach as compare with the existing approaches.

Keywords: K-means, Neural Network, Fault Prediction