

# A Combination of Context-Fuzzy Clustering Method and Learning with Forgetting Algorithm in a Neural Network Model to Generating Fuzzy Rules

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**Abstract:** Many researches have been carried out to explore fuzzy rules from a given dataset. We are interested in generating fuzzy rules for the classification problem in contextual situations. We present in this paper a neural networks model which has predetermined consequent parameters. The antecedent parameters are initiated basing on the result of the context fuzzy clustering method [W. Pedrycz, 1996]. After structural training phase, rough fuzzy rules with concrete premises and consequent components are achieved. The parameter training phase then refines featured values of each feasible rules.

An innovation version of the above network allows automatically finding the consequent components of rules. Learning-with-forgetting algorithm is integrated in the parameter training phase to reject a number of redundant connections and nodes. Some initial experiment results for the classification problem of member countries of United Nation Organization (UNO) according the Human Development Index (HDI) will be presented. The report statistics of UNO in the year 2006 from UNDP website is used.

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