

Radial Basis Function Neural Network Modeling on Numeric-Categorical Mixed Data using Ensemble Clustering

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ABSTRACT

Radial basis function neural network (RBFNN) is one of the most popular neural network models for disease and health classification problem. Classification using medical record data usually involve mixed numerical and categorical data type. RBFNN modeling involves clustering process to estimate radial basis function parameter. Previous RBFNN research clustering process did not consider whether its numerical, categorical, or mixed numerical and categorical data type. To handle those mixed type data, we propose ensemble method by applying K means for numerical data and K mode for categorical data, then combine both clustering result with ensemble clustering. The proposed method is applied to hearth disease data and shown well comparable result, and even better compared to previous research using same data.

Kata Kunci: Radial basis function neural network, mixed data, ensemble clustering, heart disease