Erratum to ‘‘**Fuzzy Cluster Quality Index using Decision Theory**’’ [Indian Journal of Computer Science and Engineering, Vol 4 Issue 6 (2013) 453–458]

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The author regrets for the error in the introduction part of the manuscript. The correct introduction is given below. The author would like to apologise for any inconvenience caused.

1. Introduction

Clustering[1,2,3,4,5] involves the task of dividing data points into homogeneous classes or clusters so that items in the same class are as similar as possible and items in different classes are as dissimilar as possible. In non-fuzzy or hard clustering, data is divided into crisp clusters, where each data point belongs to exactly one cluster. In fuzzy clustering, the data points can belong to more than one cluster, and associated with each of the points are membership grades which indicate the degree to which the data points belong to the different clusters.

The most widely used fuzzy clustering algorithm is Fuzzy c-means clustering algorithm proposed by Bezdek(1981).FCM clustering requires users to predefine the number of clusters. It is not always possible to know the number of clusters in advance. Different Fuzzy partitions obtained different values of c. Thus the evaluation methodology needed to evaluate each of the fuzzy partitions to determine the optimal number of clusters.Many validation criteria proposed to evaluate fuzzy partitions.Bezdek proposed partition coefficient. Optimal fuzzy partition is obtained by maximizing partition coefficient.Xie-Beni and Fukyuma proposed the validity index that focused on compactness and separation. Most of the traditional validity indices are based on distance measures.

The remainder of this paper is organized as follows. In the next section we review the Fuzzy C-Means clustering algorithm. Section 2 describes Basic Fuzzy C Means Clustering Algorithm.Section3 provides cluster validity problem descriptions. A number of fuzzy cluster validity indices available in the literature are presented in Section 4. Section 5 gives the proposed cluster quality index. Conclusions are drawn in Section 6.