



IMPROVEMENTS ON COMMON VECTOR APPROACH (ThuPmOR1)

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* Abstract :

In multi-class problems, within- and between-class scatters should be considered in classification criterion. The common vector approach (CVA) uses the discriminative information obtained from within-class scatter of any class. It has been shown that this classical CVA method gives high recognition rates in multi-class problems. In this study, improvements on the CVA method that consider both within- and between-class scatters are proposed and they are compared with the classical CVA. method. Although both methods give almost the same recognition rates on TI-digit database, they give better dimensionality reduction than the classical CVA method. The improved CVA methods also reduce both the processing time and the memory requirement of the classification parameters.