

Gender Classification Using an NFS-SVM Classifier

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Abstract

SVM and eigenspace projection methods are widely used in pattern recognition. A separating hyperplane and the projection axes are found for solving the two-class classification problem. The covariance matrices always represent the class scatters. In this paper, class scatter matrices are classified into four categories and embedded into SVM optimization. The nearest feature space (NFS) metric which considers the point-to-space (P2S) distances is embedded into the optimization process for gender classification. Some experimental results are conducted to show the effectiveness of the proposed method.

Keyword : Support vector machine, eigenspace projection, gender classification, class scatter matrix