Abstract

The blind image separation has been widely investigated nowadays. As a result, many algorithms of feature extraction have been developed for direct application of such image structures. One example of this, the separation of mixed fingerprints found in a crime scene, in which a mixture of two or more fingerprints may be gathered, for identification, they must be separated. In this paper, we propose a new technique for multiple mixed images separation based on modified Weibull distribution. We use an efficient method based on genetic algorithm and maximum likelihood for estimating the parameters of such score functions. Also the accuracy of this proposed distribution is measured, and we compare the algorithmic performance using the efficient approach with some other previous distributions. The numerical results show that the proposed distribution is flexible and has efficient results.


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Index Terms

Computer Science Image Processing

Keywords

Source separation, blind image separation, FastICA, Maximum likelihood, Genetic algorithm, Modified Weibull distribution.