Independent component analysis for understanding multimedia content

Independent component analysis of combined text and image data from Web pages has potential for search and retrieval applications by providing more meaningful and context dependent content. It is demonstrated that ICA of combined text and image features has a synergistic effect, i.e., the retrieval classification rates increase if based on multimedia components relative to single media analysis. For this purpose a simple probabilistic supervised classifier which works from unsupervised ICA features is invoked. In addition, we demonstrate the suggested framework for automatic annotation of descriptive key words to images.

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Cognitive Systems
Contributors: Kolenda, T., Hansen, L. K., Larsen, J., Winther, O., Bourlard et al., H. (ed.)
Pages: 757-766
Publication date: 2002

Host publication information
Title of host publication: Proceedings of IEEE Workshop on Neural Networks for Signal Processing XII, Martigny, Valais, Switzerland, Sept. 4-6
Publisher: IEEE Press
ISBN (Print): 0-7803-7616-1
Keywords: ICA, webmining, multimedia signal processing
Electronic versions:
imm789.pdf
DOIs:
10.1109/NNSP.2002.1030096

Bibliographical note
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Source: orbit
Source-ID: 58182
Research output: Research - peer-review › Article in proceedings – Annual report year: 2002