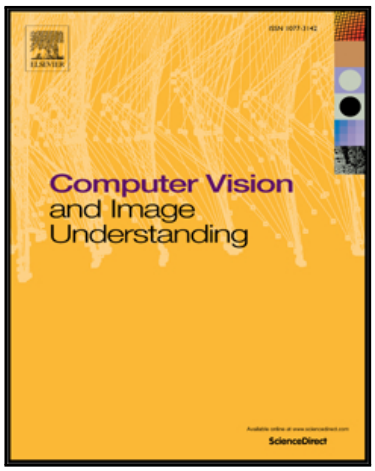

Medical images modality classification using discrete Bayesian Networks

Jacinto Arias, Jesus Martí-nez-Gómez, Jose A. Gámez,
Alba G. Seco de Herrera, Henning Müller

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Highlights

- We propose and evaluate a pipeline for the use of visual descriptors extracted from medical images as input in discrete Bayesian Network Classifiers
- We compare the results obtained thanks to our pipeline with other proposals in the scenario of the ImageCLEFmed 2013 competition.
- When coping with classification problems including large number of classes, hierarchical approaches are supplementary for increasing the baseline accuracy.
- The proposed discretization and feature subset selection techniques allow for a proper integration of any combination of visual descriptors. Moreover, the resulting number of variables does not necessarily increase when integrating new descriptors.
- In contrast to other participant's proposals, we present a generalist classification system (ranking 3rd out of 8) that has not been optimized to the competition problem.
- The use of probabilistic classifiers allows us for a deep result analysis, which let us identify the weak points in the discrimination capabilities.