

An Improvement of Multi-Label Image Classification Method Based on Histogram of Oriented Gradient

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Abstract : Image Multi-label Classification (IMC) assigns a label or a set of labels to an image. The big demand for image annotation and archiving in the web attracts the researchers to develop many algorithms for this application domain. The existing techniques for IMC have two drawbacks: The description of the elementary characteristics from the image and the correlation between labels are not taken into account. In this paper, we present an algorithm (MIML-HOGLPP), which simultaneously handles these limitations. The algorithm uses the histogram of gradients as feature descriptor. It applies the Label Priority Power-set as multi-label transformation to solve the problem of label correlation. The experiment shows that the results of MIML-HOGLPP are better in terms of some of the evaluation metrics comparing with the two existing techniques.

Keywords : data mining, information retrieval system, multi-label, problem transformation, histogram of gradients

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