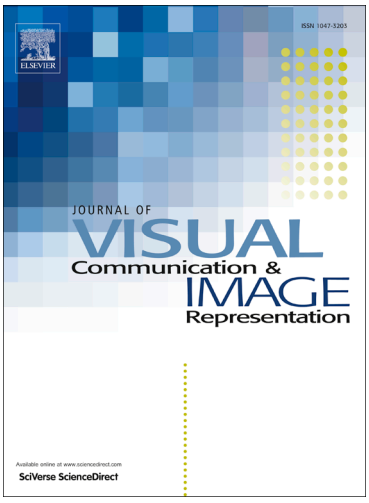

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Abstract

Automatic image annotation is one of the most important challenges in computer vision, which is critical to many real-world researches and applications. In this paper, we focus on the issue of large scale image annotation with deep learning. Firstly, considering the existing image data, especially the network images, most of the labels of themselves are inaccurate or imprecise. We propose a Multitask Voting (MV) method, which can improve the accuracy of original annotation to a certain extent, thereby enhancing the training effect of the model. Secondly, the MV method can also achieve the adaptive label, whereas most existing methods pre-specify the number of tags to be selected. Additionally, based on convolutional neural network, a large scale image annotation model MVAIACNN is constructed. Finally, we evaluate the performance with experiments on the MIRFlickr25K and NUS-WIDE datasets, and compare with other methods, demonstrating the effectiveness of the MVAIACNN.

Keywords

Deep learning; Automatic image annotation; Adaptive label; Multitasking; Convolutional neural network

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