

[2010-0073]基于视觉权值的分块颜色直方图图像检索算法

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摘要

为了进一步提高基于颜色直方图的图像检索系统工作效率,本文以人眼视觉感知特性为基础,结合局部图像相关性,提出了一种基于视觉权值的分块颜色直方图图像检索新方法.该方法首先对图像进行分块处理,并计算出图像子块的颜色直方图;然后结合反映局部区域变化的像素点颜色复杂度,计算出图像子块的视觉权值;最后利用视觉权值对子块颜色直方图进行加权处理,并根据加权颜色直方图进行图像检索.仿真实验结果表明,本文算法能够准确和高效地查找出用户所需内容的彩色图像,并且具有较好的查准率和查全率.

关键词 [图像检索,分块颜色直方图,颜色复杂度,视觉权值](#)

分类号

A Color Block-Histogram Image Retrieval Based on Visual Weight

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Abstract

According to the human visual system (\$HVS\$), a color block-histogram image retrieval based on visual weight is proposed in this paper. Firstly, The image is split into blocks and the color block histograms are formed. Secondly, the color complexity measure (\$CCM\$) of pixels are calculated which reflecting the image local variation, and the visual weights for subblock images are calculated. Finally, all color block histograms are weighted by the visual weight, and the similarity between color images is computed by using the weighted color block histogram. Experimental experiments, including comparisons with state-of-the-arts, show the effectiveness of our algorithm in improving the retrieval performance.

Key words [Image retrieval](#) [color block-histogram](#) [color complexity measure](#) [visual weight](#)

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